

Challenge Competitions in Economic Development: A Discussion of NYC Policy Under the Bloomberg and De Blasio Administrations

By Euan Robertson¹

Introduction

This paper explores the use of *challenge competitions* as tools for economic development. More specifically, the paper examines the use of such models to foster the growth of the entrepreneurship and innovation ecosystem in New York City from the period 2008-2019.

It does not seek to evaluate empirically the effectiveness of these approaches, but instead is intended to offer municipal policymakers and other stakeholders a frame of reference for considering if, when and how to deploy one particular tool in the economic development toolbox.

The scope of the analysis covers the key policy drivers for the use of competition models commencing in the Bloomberg Administration, their design, the adoption and evolution of such models in the de Blasio Administration, and the co-opting of the model by a major corporate entity, Amazon, in their recent 'HQ2' bid process.

While not a panacea, prize competitions in their various forms can be an effective mechanism to uncover privately held market data in a cost-efficient manner, leverage significant counterparty investment with a limited set of public or private resources, source novel ideas and market-based solutions, and generate public engagement and mobilization.

However, if not carefully designed they can also result in disenfranchisement of communities and key stakeholder groups, sub-optimal allocation of scarce public resources, 'race to the bottom' dynamics, and privatization of public resources in a way which favors near-term gain over long-term stewardship.

Given the above, the prize competition is a powerful tool for economic development policymakers but one which should be used sparingly and with careful consideration of unintended consequences. At their best, such competitions are open, inclusive and targeted at a problem which cannot otherwise be readily solved using other more traditional approaches.

1. Euan Robertson is currently the Chief Operating Officer of the Simons Foundation. Prior to that, he held a number of public and not-for-profit roles at the intersection of economic development, science, technology, and entrepreneurship. He served under both the Bloomberg and de Blasio administrations, including as Chief Operating Officer of the New York City Economic Development Corporation (NYCEDC). He also served as Director of Special Projects for Columbia Technology Ventures, the tech transfer arm of Columbia University, and as President and COO of the MaRS Discovery District in Toronto, Canada. Euan holds an MBA from London Business School and an MA from the University of St. Andrews.

Definition of Prize Competition Models

By ‘prize competition models,’ we refer to the use of open, large scale competitive processes where entities (usually companies, institutions, or investors) are invited and incentivized to propose a novel problem-solving activity where the merits of those respective proposals are judged relative to one another by those running the competition.

Typically, in economic development, the incentive takes the form of a ‘prize,’ which could be financial support, access to a scarce public resource (e.g. land), and, importantly, public recognition. In return, competitors are expected to do that which is transformative, i.e. having a broader systemic impact on the economy or producing a highly innovative solution to a major challenge.

Additionally, one important subset of such competition models seeks to solve ‘wicked problems’ — extremely challenging public policy issues which for a long time have defied solutions due to their complexity, interdependencies, and the requirement for multiple stakeholders to change their behavior.

Use of challenge competition models by governments is far from new, particularly at the intersection of economic development and technological innovation.

In 1714 the British government offered a series of prizes ranging from \$10,000-\$20,000 (\$2 million to \$4 million in 2018 dollars) to anyone who could provide a reliable, robust solution to the challenge of determining longitude at sea. The work of Yorkshire craftsman John Harrison on successive solutions to this hitherto intractable problem resulted, in 1761, with the submission of his ‘H4’ chronometer to the prize committee and the subsequent “open sourcing” by the Board of Longitude in 1767 of his designs which remained the de facto standard for maritime navigation devices for more than a century.¹

Determining a solution to establishing longitude at sea was far from an academic exercise on the part of the British government. It was, in fact, the most pressing economic development issue of day. Controversial as the resultant history may be, in a world where national wealth depended on seeking out new maritime trade routes, securing the ability to accurately navigate the sea conferred a tremendous competitive advantage.

Much more recently, several cities and nations have used challenge models in an attempt to unlock economic growth. The remainder of this paper examines some specific cases of their use in New York City under both the Bloomberg and the de Blasio Administrations, briefly touches on their adoption elsewhere, and concludes by looking at a recent flipping of the model in terms of the Amazon HQ2 competition.

Traditional Approaches to Economic Development

In New York City, as in many large cities around the US, in the period before the 2000’s economic development was often based around tax incentives.

This traditional approach tries, by reduction or elimination of certain taxes, to make a location more attractive for a company and hence to either retain the associated jobs, expand them, or capture new jobs through attraction of companies to the jurisdiction.

The tax incentives involved, particularly at a municipal level, are often those levied on real estate. In New York City the ability of the city government to alter tax structures is constrained but for those related to real estate. Under the rubric of cities as *creatures of the state*,² the ability to independently set tax policy is fundamentally limited by preemption. NYC can set only Real Property Tax rates without NYS legislative and gubernatorial approval, and can also, via entities enabled by State legislation such as the Industrial Development Agency (which as a practical matter is run by the City’s Economic Development Corporation) use Payments in Lieu of Taxes (PILOTs) to change the tax structure of a specific property.³

This approach, while having validity in certain circumstances, pre-supposes that company location decisions are heavily influenced by the cost of developing and operating physical facilities. While it is true on the margin that reducing the cost of office or factory space could cause a company to decide to locate or expand in a given location, the reality is that in the modern economy company location decisions are far more complex.

In particular in cities like NYC, where the economy over time has skewed far more towards ‘knowledge’ based industries, access to a pool of well qualified talent, reliability of infrastructure (e.g. transit), and quality of life (parks, schools, culture) are often more key.

NYC's geographic factors—land constrained, dense, bordered by NJ—mean that competing on the basis of real estate tax incentives inevitably becomes a zero-sum game and a race to the bottom.

Nevertheless, under the Giuliani administration, for example, NYC granted billions of dollars⁴ of tax incentives through the IDA and the NYCEDC. These primarily went to retention deals, in an effort to ensure that jobs in financial services—long the bedrock of New York's economy (representing roughly one third of income tax revenues)—remained in the city at a time when cost pressures, globalization, and technology changes were causing banks, insurance companies and other large employers to move back office and support jobs to lower cost locations.

The purpose of this paper is not to evaluate the effectiveness or otherwise of real estate tax incentives, but to instead analyze the broader set of tools used in economic development competition models. However, it is notable that by the time Mayor Michael Bloomberg took office in 2001 policy had already begun to shift away from reliance on both as-of-right and discretionary tax incentive structures, or at least attempt to deploy them in a more targeted fashion.

A good example of targeted deployment of such incentives was the attempt following World Trade Center attacks in 2001 to ensure businesses and jobs did not flee Lower Manhattan. Geographically targeted incentives such as the Commercial Revitalization Program (CRP) and Lower Manhattan Relocation Employment Assistance Program (LM-REAP) undoubtedly had some impact on commercial rebuilding, but the neighborhood has arguably seen more impact from a change from being a primarily commercial CBD to becoming far more of a thriving residential and mixed-use area.

Regardless, even when more targeted the competition dynamic in tax incentive mechanisms is inherently inter-jurisdictional; New York's gain is New Jersey's loss, and vice versa.

Bloomberg: The Market Pragmatist

The recovery of NYC from the 9/11 terrorist attacks and uncertainty around the future of jobs and the economy undeniably played a role in the election, by a narrow margin, of a self-made technology multi-bil-

lionaire with no prior experience of political office. Mayor Bloomberg in his 2001 campaign ran on, amongst other things, his experience as a businessman which he would leverage to ensure jobs and companies did not flee the city.

Recall that, in addition to the fear caused by the largest terrorist attack ever seen on US soil, upon taking office the Mayor and his team faced a ~\$6 billion budget shortfall due to depressed revenues arising from that disaster, the bursting of the first internet bubble and the attendant stock market collapse which quickly segued into the 2002 recession.

One of Bloomberg's first actions as Mayor-elect was to appoint Daniel Doctoroff⁵ as Deputy Mayor for Economic Development. Doctoroff, an investment banker, had led NYC's failed bid to host the 2012 Olympic games. In his recent book, *Greater Than Ever: New York's Big Comeback* Doctoroff explains how planning for the Olympic bid influenced Bloomberg economic development policy:

“A big part of the Olympic vision was to take parts of the city used for purposes perhaps well suited to the nineteenth—and even most of the twentieth—century New York economy and transform them into vital parts of a growing twenty-first century New York by making them into new communities.”

**‘Greater Than Ever: New York's Big Comeback,’
Daniel L. Doctoroff, p.70**

Not only did the Olympic bid experience help generate a blueprint for an economic development strategy, but involvement in precisely that type of large scale, open, global competitive bid model would set the tone for key competition-based policies and initiatives later on.

One important feature of an attempt to augment tax incentive-based competition which emerged fairly early in Bloomberg's tenure was an emphasis on diversification. As a sophisticated businessman who had made his fortune serving the financial services industry, he recognized the importance of a diversified portfolio to smooth out risk.

The NYC economy had for long been over-indexed on the banking and finance sector as well as to large multinationals in general. This resulted in amplifications of the boom-bust cycle, with the city thriving when Wall Street did well and hurting when markets crashed. It

also led to over-concentration of economic activity in the Manhattan Central Business Districts.

By 2005, therefore, the Administration had developed a policy platform which attempted to diversify the economy by growing sectors other than finance, and to spread that activity to other parts of the city. The Five Borough Economic Development Plan⁶ explicitly set objectives around diversifying the economy and building commercial centers in all five boroughs.

Of course, the Bloomberg Administration also made extensive use of tax incentives and debt-based financings, often to undertake large scale redevelopment which it claimed would add to the infrastructure of the city. Most controversial of these efforts were probably the incentives given to create new stadia for both the Mets and the Yankees baseball teams.

Bloomberg (Response to the 2008 Financial Crisis)

In 2008, the Bloomberg Administration was nearing the end of what at that time was the Mayor's final term. In the preceding few years, the economy had been booming but storm clouds were on the horizon. On September 15th, the markets opened to the news that Lehman Brothers had filed for bankruptcy.

Faced with a global financial crisis, Mayor Bloomberg and his economic development team began to double down on previous attempts at economic diversification. Unsure of how deep the downturn would be or how long it would last, one initial concern was to ensure that talent, upon which a modern economy like that of NYC had come to rely so heavily, did not flee the city in droves.

Another concern was to figure out where jobs for the recovery would come from, and how to best support that growth—in particular how to support high growth potential startups which could rapidly replace jobs being lost in financial services.

To address both these issues, in 2009 under the leadership of newly-appointed President Seth Pinsky the Economic Development Corporation began to develop and launch various programs and strategies to foster entrepreneurship and grow multiple key industries, including the nascent tech sector.

NYC had a brief flirtation with tech in the Silicon Alley days of the first internet boom, but aside from a few success stories (notably, the acquisition of DoubleClick by Google in 2007 for \$3.1 billion) the industry had never taken root and largely remained in the shadow of the more traditional FIRE (Finance, Insurance, Real Estate) sectors.

Recognizing that large corporates were likely to remain in retrenchment mode for some time and that tech was increasingly disrupting key NYC sectors such as media, healthcare, and even fashion, the EDC team developed packages of programs, often as part of an industry-focused “2020” plan, to support innovation and entrepreneurship.

An important tool in these efforts was the use of competition models to incent startup formation and increase engagement by some of those recently laid-off by the investment banks.

Leveraging Public Datasets: Big Apps

For example, in 2009 the NYCEDC launched New York City's first *Big Apps* competition. By collecting a cross-section of data from multiple city agencies and challenging developers to use that data to build new apps, the hope was to engage more talented people in technology, profile the City's leadership in that space, attract interest from companies and investors, and anchor some startup activity.

Big Apps is now in its 8th year and has evolved significantly since launch. Similar competition models based around municipal data have become commonplace as part of a drive towards open data standards and civic tech/municipal hacking. But the basic principles of this competition model for economic development have remained unchanged.

By offering relatively modest prize-based incentives (in the case of *Big Apps*, total cash awards have not exceeded ~\$150,000) leveraging a public resource (initially, municipal data sets, and later access to city agency pilot programs) to solve important civic problems, and doing so in an open competition model, cities have been able to create momentum around entrepreneurship and startup, reap the benefits of solutions provided by multiple participants—effectively crowd sourcing solutions—and in some cases unlocking genuine breakthroughs in innovation.

While competition-based initiatives and sector-focused programs provided helpful signaling, the Bloomberg economic development team was conscious that something larger scale and more systemic would be required to really move the needle on NYC’s ~\$1.5 trillion economy.

After obtaining extensive input from industry leaders, think tanks and other stakeholders, the Administration identified both the scale and quality of technology talent and IP transfer as critical components which would be needed to fuel the recovery and build the NYC economy of the future.

To address this, they turned again to a competition mechanism, and in December 2010 they launched *Applied Sciences NYC*. Positioned as a “challenge to top institutions from around the world to propose a new or expanded applied sciences campus in New York City,”⁷ the City offered \$100M in funding and a variety of city-owned properties on which to build. The process was intentionally designed to leverage many of the features of competition models:

Presidents of a select pool of academic establishments each received a personal letter signed by the Mayor inviting them to participate, leading to a sense of exclusivity. Selection was structured in rounds, with an initial phase (RFEI) to build interest and excitement leading to a subsequent more detailed phase (RFP).

A timeline was established, underpinned by the ticking clock counting down to the end of Mayor Bloomberg’s third term⁸ in office, creating a sense of urgency amongst participants. The Administration played up this urgency, having the Mayor describe it as a “once in a generation opportunity.”⁹

Significant effort was undertaken to make aspects of the process ‘public’: for example, during the RFEI phase Presidents and Provosts from interested institutions were invited to the city for a two-day program of ‘informational’ events, which included a reception at the Met, breakfast at City Hall, a presentation and lunch in boardroom of the New York Stock Exchange, and tours of the city-owned sites. These events served to intensify the sense of competition amongst the institutions (and hence the perceived value of being a winner), raised the public profile of the contest, and sell the benefits of being part of all that NYC has to offer.

As mentioned previously, one benefit to economic developers of such competition models is the ability to benefit from the work and insights of multiple participants. Depending on the competition dynamic, this can be structured in a more or a less formal way. In some cases, there are gold, silver and bronze prizes. Often, as a condition of participating, respondents are required to acknowledge that their contributions may be used even if they are not the ‘winner.’

Creating multiple ‘tracks’ is another popular approach. In the case of *Big Apps*, what began as a broadly defined competition (the City made various dataset available; developers were invited to build apps, and various awards were made based on selection mechanism such as “popular choice” and “investors choice”) matured over time into a very structured program with various tracks focused on key problems the city faced such as “Affordable Housing Challenge” and “Civic Engagement Challenge.”

In all these cases, from an economic development point of view the competition organizers (NYCEDC) and the city benefit from all of the time, energy and resources put into the competition by all the participants for a relatively small investment in prizes and incentives on the part of that organizer.

In the case of *Applied Sciences NYC*, while during the competition the organizers created a sense of ‘winner take all’ to ensure participants placed their best offers on the table, the City in fact managed to benefit from several of the responses. After selecting a joint venture between Cornell University and The Technion to create a new campus on Roosevelt Island as the main

winner, the City announced several additional projects including the creation of a Data Sciences Institute at Columbia University and the creation of a Center for Urban Science and Progress (CUSP) at NYU.

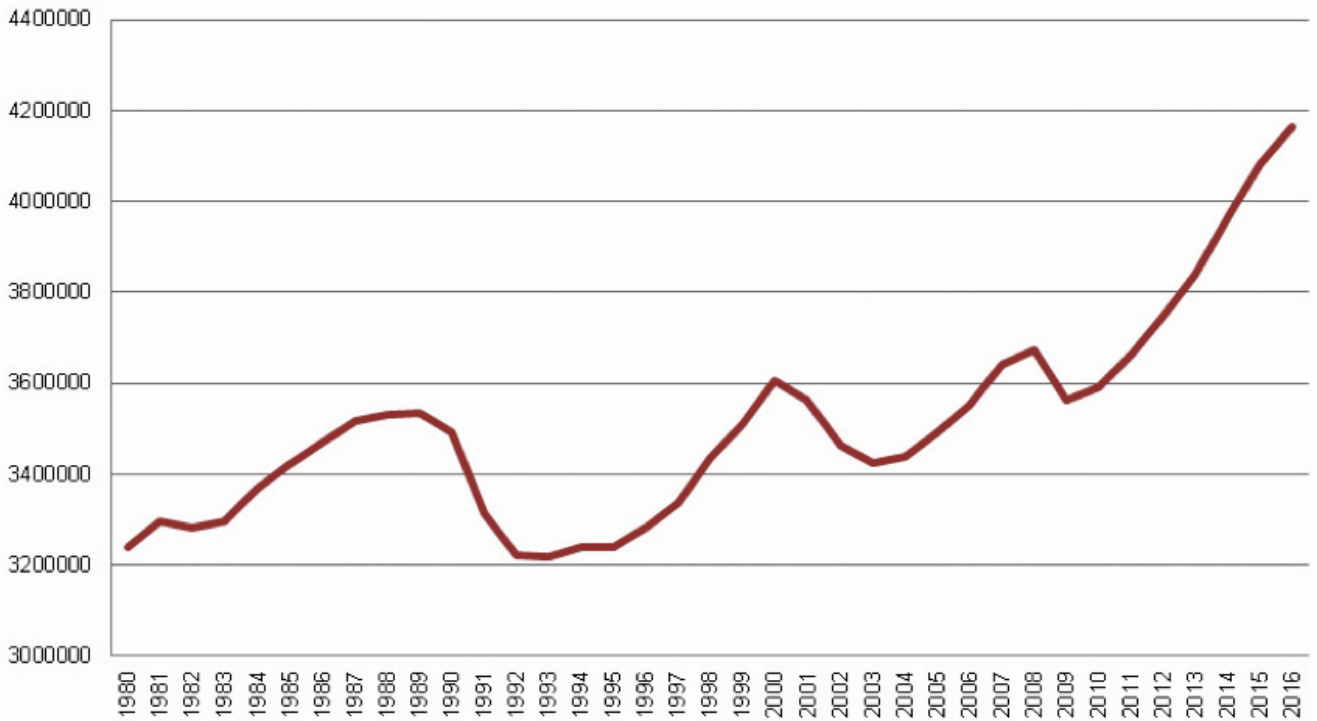
The Bloomberg Administration claimed that together, the Applied Sciences projects would contribute over \$30 billion¹⁰ to the NYC economy over 30 years and double the number of engineering graduates. While correlation is not causation, the Applied Sciences initiative combined with other efforts to strengthen NYC's tech sector coincided with a period of explosive growth 2008 to the present. In a report in 2017, New York State Comptroller Tom DiNapoli said¹¹ "New York City has become one of the most important tech hubs in the country." Greg David, writing in Crain's¹²

and using updated data from the Comptroller's Office claimed in February 2018 that NYC was now "the sector's second official city" [after SF] with 7,500 firms employing over 120,000 people.

While it is difficult to parse out the overall economic impacts of individual prize-based competitions on an economy as large as that of NYC, it is also undeniable that something significant has changed in the city's economy. At time of writing, NYC has been experiencing a record economic boom, with historically low unemployment rates and significant jobs growth. The recovery which began under Bloomberg has continued apace under de Blasio and, unlike in previous cycles, has been fueled not by financial services but (at least in part) by the tech economy.



NYC total employment has grown steadily since 2009, and is more than 500,000 above the previous peak

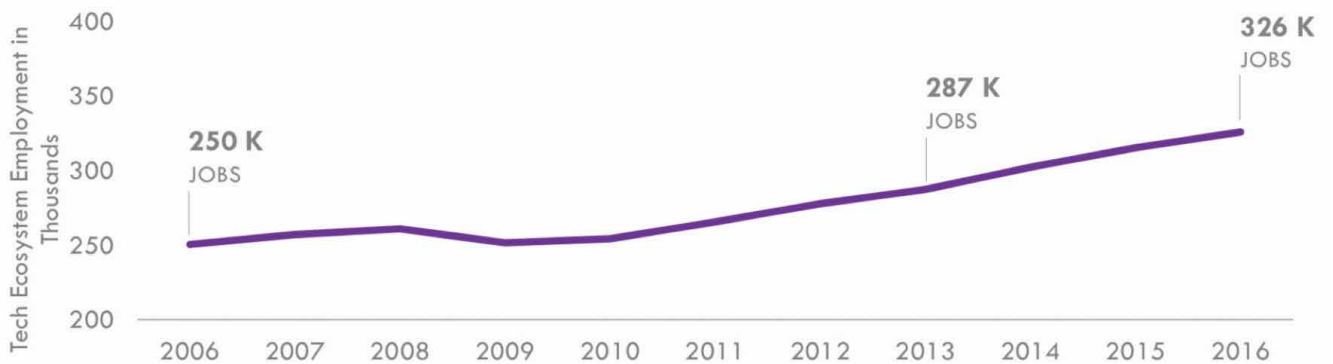


Source: NYS DOL, June 2017.

TECH ECOSYSTEM GROWTH

NYC'S TECH ECOSYSTEM HAS GAINED 76,000 JOBS IN THE PAST TEN YEARS & 39,000 JOBS IN THE PAST THREE YEARS

TECH ECOSYSTEM JOB GROWTH (2006-2016)



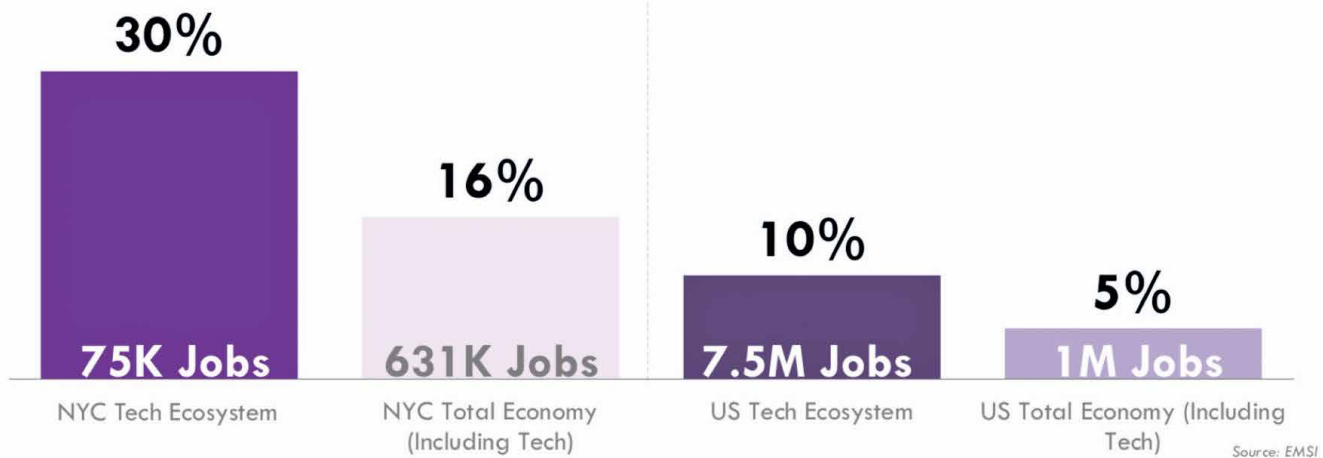
Note: The 2014 report *The New York City Tech Ecosystem* quantified a 2013 Tech Ecosystem size of 291,000 jobs. Fluctuations in this figure are due to periodic updates in the underlying State and Federal labor data sources that comprise the EMSI data resource. This includes updates to the BLS Quarterly Census of Employment and Wages, US Census American Community Survey, US Census County and Zip Code Business Patterns, and US Census Non-Employer Statistics.

Source: NYC Tech Ecosystem Report, HR&A Advisors, 2014

TECH ECOSYSTEM GROWTH

NYC'S TECH ECOSYSTEM HAS GROWN NEARLY TWICE AS FAST AS NYC'S OVERALL ECONOMY, 3X FASTER THAN THE U.S. TECH ECOSYSTEM, AND 6X FASTER THAN THE OVERALL U.S. ECONOMY.

TECH ECOSYSTEM JOB GROWTH 2006-2016



Source: NYC Tech Ecosystem Report, HR&A Advisors, 2014

De Blasio Administration: Inclusion and Diversity in Competitions

Most casual observers would agree that Mayor Bill de Blasio, who took office in January 2014, was not the natural successor to Mike Bloomberg. In a campaign which reflected significant frustration felt by many on issues of income disparity, equity and inclusion—the ‘Tale of Two Cities’—the de Blasio Administration was unlikely to continue business as usual in terms of an economic development approach.

Perhaps surprisingly, however, when it comes to the use of competition models there has been a great deal of continuity. In this section, the paper will

examine how the de Blasio has built on, and in some cases improved the use of prize competitions started under Bloomberg, and ways in which the structure of those competitions reflect their different political and policy priorities.

Again, the Big Apps competition offers an excellent example. As one of the programs which starting immediately post 2008 financial crisis which is still operating today, Table 1 below summarizes they ways in which the structure of Big Apps has evolved over time:

Table 1

Year	Key Elements/Changes
2009	Initial pilot. Prizes awarded “overall,” ‘Investors Choice,’ ‘City Talent’ (i.e. City Agencies), ‘Popular Choice (i.e., Public Vote) and ‘Data Visualization’ categories
2010	Simplified prize structure—“overall” and “Popular Choice” only.
2011	All applications now initially screened by online public vote. Top 25 go to judging. \$5,000 prize pot.
2012	Prize pot expanded to \$50,000. BMW iVentures joins as anchor sponsor. Introduction of category tracks (best green app; mobility app; education app. Introduction of special award for mashups of NYC data.

Year	Key Elements/Changes
2013	Expansion of prize pot to \$150,000. Introduction of a specific focus on “jobs and economic mobility.” Category tracks in health and lifelong learning
2014	Prize pot reduced to \$100,000. Facebook, Ebay, Microsoft and Google join as sponsors. Four themed tracks (Live, Work, Learn, Play) and three channel apps (mobile, web, game).
2015	Explicit focus on policy priorities—prize tracks in Affordable Housing, Zero Waste, Connected Cities, and Civic Engagement.
2016	Competition did not run.
2017	Up front support for project design and ideation provided by Civic Hall over 4 months. ESRI, First Republic, and LINK NYC/Intersection join as sponsors. Policy specific tracks for Transportation, Knowledge, and Community Resiliency. Winners receive admission to Civic Hall Accelerator program and piloting of their product, in addition to cash prizes worth \$30,000..

It is clear from the above that in 2013 as City Hall headed to a transition, the economic development teams at EDC which run Big Apps had already begun to anticipate ways in which the program might better address likely priorities of the incoming administration. For example, we see the introduction of a prize track specifically focused on *economic* mobility. Previous ‘Bloombergian’ *Big Apps* contests featured mobility heavily—but more physical than economic. A subway navigation app and Big Apps winner in 2011, *EmbarkNYC*, went on to receive investment from BMW Ventures and was subsequently acquired by Apple.

By 2017, we can see the priorities of the de Blasio Administration clearly reflected in Big Apps. Original competition organizer ChallengePost (now Devpost), a for-profit competition platform founded in 2009 which had raised millions of dollars from angel investors and venture capitalists had been replaced by Civic Hall, a not-for-profit focused on building collaborative communities and using technology for the public good. Competition tracks now included three demographically-defined ‘foci’—youth, seniors, and immigrants—and challenge tracks included:

“Community Resiliency – Building strong communities by fostering more inclusion and connection for youth, seniors, and immigrants where they live, learn, work, and play.”

But the de Blasio Administration did not simply tweak existing Bloomberg programs. Under the auspices of the newly created Mayor’s Office for Technology and Innovation, led by a newly created Chief Tech-

nology Officer role, the City has extended the use of prize competitions. In October 2017, just ahead of his re-election to a second term, the Mayor and the CTO announced NYCx, which was described as

*“a new civic platform...that provides a vehicle for tech startups and New Yorkers to invent digital solutions to common problems. Crime, traffic, pollution, all issues are on the table.”*¹³

The NYCx platform is current structured around two main challenge types—‘moonshots’ and ‘colabs.’ Moonshots are defined as citywide challenges for entrepreneurs to address with business models, while ‘colabs’ are focused on engaging community members to develop and pilot solutions to problems at a local scale. Presently two moonshots address replacing gas-powered vehicles and deploying broadband on Governors Island, while two colabs located in Brownsville, one of NYC’s most economically disadvantaged neighborhoods, address environmental stewardship and night-time crime reduction in commercial corridors.

These NYCx challenges clearly address issues which are broader than those typically the concern of economic development policy, although ultimately there is a nexus with job creation and company expansion. It is perhaps too early to identify the impact or otherwise of these programs, and the CTO role has seen significant turnover, with the most recent incumbent departing somewhat suddenly after only eighteen months, as did his predecessor.

EDC, traditionally the home for these types of initiatives under the Bloomberg Administration, has also not been idle under de Blasio when it comes to the use of the challenge model. In 2016 the Mayor announced an EDC-run LifeSci NYC program, which proposes to invest \$500 million over 10 years to grow a commercial life sciences sector in NYC.

Applied Sciences Redux: Translational Applied Life Sciences Hub

The centerpiece of that program is a challenge to create a new ‘*Translational Applied Life Sciences Hub*.’ With \$100 million and city-owned sites on offer, an RFEI process launched in early 2018 positioned as

*“a historic opportunity....to establish an Applied Life Sciences Hub—a world-class facility for life sciences research and development.”*¹⁴

the initiative draws heavily on Bloomberg’s Applied Sciences initiative for inspiration. However, in this as in the other continuations of the prize challenge model we can clearly see the policy priorities of the de Blasio Administration reflected. For example, the very first program to launch under the LifeSci NYC umbrella included a novel program to connect paid interns at graduate and undergraduate level with life sciences companies. Listed first among the various objectives of this program is to:

*“Assemble a cohort of participating interns that reflects the diversity of New York City university students with a special focus on students from disadvantaged communities and economic backgrounds.”*¹⁵

At the time of writing, the Lifesci NYC Translational Applied Life Sciences Hub competition has just gotten underway. In May of 2018 the City received responses to their RFEI and a subsequent RFP is expected before the end of 2018. In the RFEI participants were asked to compete on, amongst other things, their commitments to subcontract construction work to businesses owned by minorities and women (a goal of 25%-35% has been set by the City) and to HireNYC, a city-run program which attempts to ensure jobs go to people from local communities in which new real estate is developed.

Time will tell whether this effort leads to the creation of a new institution on par with Cornell-Tech, which opened in August 2017 on Roosevelt Island, and

whether the NYC life sciences sector experiences the type of growth seen in tech since 2008. But it is clear that once again the use of a challenge competition is a key strategy being deployed by economic developers.

National and International Competition Models

Note that these challenge models being discussed are distinct from competitive procurements which all levels of government routinely undertake. When government identifies a need for goods or services, they naturally run a bidding process to source the best deal for the taxpayer. Often these processes are prescribed by various laws and regulations. In certain cases, such as when a city disposes of real estate for a private developer to build on, the process can attract a lot of public scrutiny and can be controversial.

But such competitive procurements lack several key features common to the types of competitions that are the focus of this paper. Competitive procurements are inherently one-to-one transactions. The buyer (government) has often identified in some detail the parameters of the solution being sought and has certainly identified in great detail the problem or need to be addressed. Government usually cannot make use of more than one of the solutions—there is ultimately a contract to provide the solution on the part of one vendor (or, sometimes, a consortium). While varying degrees of transparency may be involved, public recognition and celebration of the participants is not generally a core component or motivator for participants.

Recognizing the many advantages conferred by challenge competition approaches, they have been adopted at a national and internationally by both governments and philanthropy including for economic development objectives.

New York: A Global Example

Following the success in New York City of Bloomberg’s Applied Sciences competition, several countries and cities around the world borrowed from the playbook with similar contests of their own.

In Amsterdam in 2014, the city government launched a competition to encourage the creation of a similar new applied sciences institute. The winning consortium

received a prize of \$50m euro, with a second prize winner being selected for a smaller \$7m euro investment.

At the US Federal Government level, the use of prize challenges to spur innovation issued by technology focused agencies including NASA, the DoD, and DoE increased dramatically under Obama Administration. According to data from *Challenge.gov*¹⁶ (a platform run by the successor company to *Challengepost* which partnered with the Bloomberg Administration on the first Big Apps contests), there have been more than 825 challenges run by Federal agencies since 2010 involving over \$250 million in prize funds.

More specific to economic development, Nesta, formerly a UK government-affiliated body and now an independent non-profit foundation, operates a Challenge Prize Center which includes a category devoted to economic growth.

Perhaps better known are big-ticket technology-focused prizes, particularly those operated under the Xprize brand. These tend to be focused on exponential technological innovations and have popular with large private sector technology companies to underwrite as seen in the Google Lunar XPrize, the Shell Ocean Discovery XPrize and the IBM Watson AI Prize. Many of these models informed the development of prize-based competitions such as *Big Apps*.

Achieving varying levels of success, these prize competitions sometimes have a nexus with economic development, but clearly one aligned with the interests of the corporate sponsor.

Flipping the Model: Amazon HQ2

It is perhaps unsurprising that the interests of corporates converge with technology, prize competitions, and government policy in the context of modern economic development. Having attempted to moved away from offering tax incentives to companies to attract or retain jobs many economic developers, including those in NYC, recently saw the script flipped on them with an interesting cooption of the prize competition model that also included a controversial incentives package.

This cooption of the model is particularly important to understand as it represents a ‘back to the future’ moment in terms of the use of tax incentive subsidies in inter-jurisdictional corporate relocation/expansion wars.

In September 2017 and with much fanfare Amazon, the Seattle-based ecommerce giant and one of the most valuable companies in the world, announced a competition to search for a second headquarters, which rapidly became known as HQ2.

By now, many of the elements should be familiar. A public challenge was issued and amplified in the press consistently; a sense of a “once in a generation opportunity” was created; a multi-round process was described; a sense of urgency created by relatively short windows to submit for each step and a final decision timeline of late 2018. The prize being offered was as many as 50,000 jobs with average total compensation of \$150,000, as well as over \$5 billion of new capital expenditures—hard for any major city to resist.

By coopting the prize contest model, Amazon effectively turned the tables on local governments. Embedded in the Amazon RFP was an explicit requirement to “provide a summary of the total incentives being offered for the Project by the state/province and local community.” In fact, the section of the RFP dealing with tax incentives contained the most detailed and specific of all the requested information.

To its credit, the de Blasio Administration swiftly attempted to set some ground rules for participation by New York City, stating clearly that *discretionary* tax incentives would not be offered.

This public statement concerning discretionary incentives did not appear to have hurt New York’s chances as it made the cut¹⁷ in to be one of 20 ‘finalists’ from 238 initial applicants, nor did it prevent the City and the State from offering a tax incentive package worth a reported ~\$3 billion as part of their winning bid.

That these incentives—at least those offered by the City—were largely ‘*as of right*’ rather than discretionary (meaning any company bring the proposed level of jobs and real estate development to the proposed location would have received a similar package) did not, however, persuade the many vocal opponents of the deal since announcement. Nor does the fact that the incentives are tied to investment (in real estate) and the creation of jobs, that they are paid out over a long period of time, or that—at least according to the State economists—the economic activity generated could pay for those tax subsidies as much as nine times over.¹⁸

The objections to the Amazon deal, then, were not so much grounded in a rational economic evaluation of the deal and are much more about process, politics, and arguably about a much broader set of economic concerns (income disparity; under-investment in transit infrastructure; affordability of housing).

It would also appear that at the last-minute Amazon again changed the rules of the game—this time by selecting not one but two cities selected for HQ2, with the jobs and economic activity to be split between them.

By doing so, Amazon would have been able to again continue the competition, trading the respective offers of these two finalists off against their ‘share’ of the overall prize of 50,000 jobs. And as has been covered extensively in recent press, Amazon has also through this competition gained access to a treasure trove of information—infrastructure plans, population growth projections, land use and zoning plans, and more—for a large number of major US cities, each of which happen to also be major markets in which Amazon sells its products.

Moreover, it would also appear that many of the competition-based projects started under the Bloomberg Administration, such the creation of the Cornell Tech campus on Roosevelt Island and the de Blasio efforts to promote Long Island City as a destination for high tech industries (LIC includes one of the City-owned sites offered under the Life Sciences Translational Hub RFEI and was recently called out by EDC President James Patchett as an area with high growth potential) were referenced extensively in the EDC’s efforts to land Amazon HQ2¹⁹ and were factors in the company’s final decision.

The fierce (and somewhat predictable) backlash²⁰ against HQ2 in New York City from community and advocacy groups, some of whom are concerned about gentrification in the Long Island City neighborhood and some of whom are targeting the broader issues of providing tax incentives to one of the largest companies in the world²¹ was in this case accompanied by support from a handful of elected officials and by certain unions opposed to Amazon’s stance on neutrality in the face of attempts to organize the workplace (note, however that other unions who’s members would have benefited from the project were in favor). This combi-

nation of forces and the resulting decision by Amazon to withdraw from the New York City HQ2 deal has been extensively reported and will doubtless be studied in public policy schools for years to come.

One way in which the economic development team in the de Blasio Administration might have been able to do some coopting of their own in the case of the Amazon HQ2 search process would have been by borrowing again from their predecessors. In his 2011 paper “*How New York City Won the Olympics*,” Mitchell Moss of the NYU Wagner School of Public Policy advances the argument that by competing in the public challenge process for the ‘prize’ of the 2012 Olympics, a plan was introduced which subsequently became the blueprint for the Bloomberg economic development policy led by Dan Doctoroff.

In his recent book, *Greater Than Ever: New York’s Big Comeback*, Doctoroff expands on this to explain how by introducing these projects to the public under the auspices of the Olympic bid enabled the Administration subsequently to execute on several of the same ideas having already build buy-in and familiarity with the concept, and without the additional costs of underwriting the actual games.

“Hosting the Olympics—or even just bidding on them—could be the spur to actually get things done that otherwise would have been politically infeasible or financially impossible...Perhaps the single most important lesson I learned from the Olympic bid was the importance of storytelling. Without a compelling narrative that articulates the problem and the opportunity, the process of selling a complex idea is much harder.”

**‘Greater Than Ever: New York’s Big Comeback,’
Daniel L. Doctoroff, p.341 and p. 348**

While the de Blasio Administration in the initial stages of responding to Amazon called for developers and landlords to participate in the proposal being made by NYC via an EDC-issued Request for Expressions of Interest, there have been comparatively few details released to the public about what was received by EDC as a result of this RFEI process or indeed about what the City submitted in its bid to Amazon.

With NYC ultimately selected as (one!) winner, this may of course have been the smartest move. But another approach borrowed from Bloomberg, Doctoroff *et al*

would have been to run a much more public process to source ideas and projects. Using the Amazon bid as an equivalent to the Olympic bid, team de Blasio could have introduced numerous large scale and exciting development possibilities to communities across the City.

In doing so the Mayor and his team would admittedly have run some political risk. As the backlash demonstrated, Amazon and other large tech companies are far from universally popular, and any plans for large scale development in NYC inevitably have their opponents, often raising legitimate concerns. Still, putting these ideas out ‘into the bloodstream’ under the rubric of an Amazon response, even if informally, may have produced some surprisingly positive responses and generated some innovative new ideas. Despite claims that Amazon enforced strict non-disclosure conditions on competition participants, it is not beyond the wit of savvy economic development professionals and city administrators to find ways around such constraints.

A more public bid response would also have surfaced some natural constituencies in favor of the project, would have drawn out some inter-neighborhood competition (on which New Yorkers tend to thrive—Amazon for Queens! No, Bring Amazon to the Bronx! etc.)—and inoculated the final result somewhat against charges of it being a ‘backroom deal lacking accountability and transparency.’

Amazon’s decision to walk away from the proposed NYC HQ2 project is for sure a loss for the city and for the growing tech sector, but not an insurmountable one. One silver lining is that there will be less competition for hiring of technical talent which will help New York’s home-bred growth startups.

And as this fascinating and hugely ambitious project unfolds at the second site in Arlington, VA, it will likely demonstrate both all the upsides and the all downsides of competition models and provide a rare comparative study of approaches to economic incentives packages. Many of these downsides are discussed in the section which follows.

Criticisms of Competition Models

The types of competition models described in this paper are not without their critics. Poorly designed or carelessly implemented competitions can certainly fail to achieve their stated objectives and, as a result, waste scarce resources.

Normative Concerns

Some critics take issue with the concept of such competitive models, rather than with the mechanics of implementation. For example, high profile competitions to solve difficult scientific challenges, such as those launched by the US Federal government, may provide these governments with cover to reduce basic investments in science and technology research. A few highly visible prizes are certainly no substitute for a well-funded system of discovery and invention.

Lack of Sustainability

Similarly, because economic development competition models tend to be ‘point solutions’ they are also by definition transitory. Problems which require a prolonged focus over a long period of time and/or those which require broad societal interventions are not well suited to such models.

Inclusion and Participation

Other critics focus on issues of participation and disenfranchisement. Certain economic development models rely on participants expending, in aggregate, a level of their own resources disproportionate to those resources being offered through the prize. While this represents the ‘leverage’ being achieved by the competitive model, it also implies that participants must have access to resources in the first place to be able to participate. Being able to expend resources (time, money, expertise, etc.) towards an uncertain outcome by design will prevent certain individuals, groups and organizations from even taking part. This can lead to negative selection bias in the competitor group, in addition to sub-optimal outcomes if the central objective of the competitive model is to uncover novel ideas or solutions to an intractable problem.

Designed Bias

Additionally, and related to the issue of selection bias in the competitor set, the solutions designed by competitors may end up “designing out” the needs of important constituencies or addressing only the needs of those who have shared interests with the pool of competitors.

Incumbent Favoritism

And, while open competition models may certainly draw new resources and players to an economy there can also be dislocation effects on incumbents. These effects are often seen in areas secondary to the issue being addressed through the competition. For example, running a competition to create a new educational institution may result in an increase of students and faculty in the jurisdiction, but may also lead to incumbents facing a reduced share of scarce resources such as philanthropic funding (if the pool of such funding is relatively static).

Privatization of Public Resources

Prize competitions such as Applied Sciences NYC offer a non-renewable public asset (land) as part of the prize incentive. Some critics feel that transferable of such non-replenishable assets to the private sector (although, in the case of Cornell Tech the land is transferred to a not-for-profit under a very long-term lease) is not an appropriate use of such resources. That is a legitimate stance based on a political philosophy, but there is little evidence that such transfers are *inherently* bad from the point of view of efficient economic development.

Renting Jobs

Prize competitions which include tax incentives such as that launched by Amazon in their HQ2 bid are open to numerous criticisms around both the efficiency of outcomes (it is possible to produce studies which show the public gets a raw deal on ‘bang for the buck’ on tax subsidized projects), and on corporate welfare and regulatory capture. Additionally, depending on how readily relocatable the economic activity and the time horizon of the incentives, the ‘winning’ jurisdiction may simply be renting jobs, which can often be sub-optimal from a net economic impact perspective and is certainly not a solid strategy for long term growth.

Public Relations

Lastly, some critics argue that prize competitions are “*full of sound and fury*,” amounting to little more than sophisticated PR campaigns. This is particularly the case when a competition is poorly designed in terms of both the objectives (usually overly broad) and the metrics which will be used to define success.

Advice for Policymakers

As illustrated in the preceding section, prize competitions are not a panacea. Fortunately for economic developers however, these models are now sufficiently widespread and have been around for long enough that it is possible to identify some basic guidelines which address many of the criticisms and help increase the chances of success.

Problem definition: hammers and nails

First amongst these guidelines is to identify under what circumstances prize-based competition models may be a helpful tool. If policymakers have a clearly defined need and if there is a ready and well-functioning market for solutions which meet that need traditional procurement mechanisms will be far more efficient than any other approach.

Similarly, if the issue being addressed lends itself to legislative intervention then competitions will at best play a limited support role. For example, in attempting to address the issue of income inequality a prize-based competition might be used to uncover novel solutions to address one component of the root cause (such as unequal access to education addressed via a low-cost online delivery model) but legislation creating a universal basic income or reforming national tax law would likely be a far more important and impactful intervention.

Once it has been established that the issue does lend itself to a competition model approach, a number of considerations come to the fore:

- Which type of entity is best placed to run the competition? In some cases, government will be the best entity to actually design and run the competition. For example, in competitions seeking novel solutions for defense technologies the DoD has the policy mandate, technical expertise, and

- What are the ultimate outcomes being targeted? In their paper “The Craft of Incentive Prize Design” a team from consulting firm Doblin Deloitte identify this as a vital and early consideration. Competitions for which the key objective is to source new ideas, technologies, and markets have different design requirements from those where the main outcome being sought is to raise awareness and mobilize action around an issue. By spending sufficient time on ensuring a tight definition of outcomes and how those will be measured, competition designers make the subsequent tasks of identifying necessary inputs and outputs far easier. One tool which may be helpful in this is to develop a problem statement which passes the Goldilocks test. As explained in their paper, the Deloitte team defines this as a statement of challenge with objectives neither too hard (no one will will) nor too easy (won too quickly and non-optimally), is broad (to maximize participation and diversity) but not overly so (erodes submission quality) and which appropriately matches the problem with the level of resources that need to be invested by participants to solve it.
- What type and level of incentive is required to achieve the desired outcomes? Ensuring that the correct incentive is being offered to match the targeted outcomes is obviously a key step in design of any competition. Competitions often fail when designers start with the prize (“X million dollars; a plot of land; a breakfast with the mayor) and then attempt to attach that to a big, bold outcome. As an example, in a small city offering recognition/ promotion may be insufficient incentive to install a free public 5G wireless network since the scale of the pilot is sub-optimal and the promotional benefits limited. If target outcomes are clear, government policymakers with limited resources can design around the incentive problem by seeking strategic partners as co-sponsors. In the example of the 5G network, the small city could band together with a number of other cities and/ or with a relevant philanthropic foundation to increase the scale of the project and provide a greater incentive to participants.

Creating value from underutilized resources

An additional consideration for prize designers is whether they can offer incentive or competition resources which are in some way unique and costless to the host organization. Those running competitions often need to identify resources within their own organizations that can be helping in unlocking participation and innovation, but they are also usually under pressure to keep costs low. Data is an excellent example of such a resource. Government entities often hold vast troves of data, but often do not have the time or expertise to utilize this data in ways beyond the primary purpose for which it was collected. By engaging the internal ‘gatekeepers’ to this data in the right way, competition designers can make available to external parties a unique resource at low or zero cost (to the host organization).

Ownership, authority, control and cadence

- Who will own the fruits of the efforts? The submissions to such competitions often have intrinsic and potential economic value. Whether it be a new app to help people navigate a transit system or a way to deliver cargo into space, it is critical to be clear from the start on who will own the intellectual property and commercialization rights associated with the submissions. Granting these rights to participants can form an important element of the overall incentive. It can also exacerbate the types of problems discussed in the preceding section if competition designers are not careful to address issues of inclusivity and selection bias.
- What legal authorities are needed? Related to the above, and of particular relevance to government policymakers, it is essential to carefully think through legal issues and constraints well ahead of time. Of particular importance is to establish the authority under which the administering entity is empowered to offer the ‘prize’ (and checking prizes do not run afoul of conflict of interest rules), to be clear on what is and is not a “procurement,” and to ensure that those proposing ideas or prototypes as participants are not conflicted out of any subsequent procurement.

- What is the correct duration for and cadence of the competition? Some economic development competitions seek to solve a single issue with a single solution—one and done. Other types of competition naturally lend themselves to being run on an ongoing cycle, often annual. The cadence of the competition will be informed by the outcomes being sought and the resources available for incentivizing participation. Additionally, competitions seeking multiple outcomes might work best when broken into different phases or stages. The typical example of this would be where designers seek to both engage a broad constituency to generate a large set of novel ideas but also want to increase the probability of these novel ideas being adopted. In phase one, the organizers could make a broad call for concepts, focusing resources on marketing and communicating and offering a low level of incentive beyond the chance to participate. In a subsequent phase, administrators could offer some seed funding plus the incentive of a ‘grand prize’ to a much smaller subset of the most promising proposals which would be turned into working prototypes.

Adaptability and Definition of Success

- How might the model need to change over time? Related to but distinct from considerations of cadence is thinking through how the competition model might need to adapt over time. By incorporating flexibility from the start, competition designers can save significant time and effort downstream. Establishing separate ‘tracks,’ for example, enables future iterations of a competition to be revised to address issues of participant inclusion should these become apparent after an initial round or cycle. Equally important closely tied to success metrics which are discussed next is building in a ‘kill switch,’ particularly for competitions administered by public entities. By setting clear criteria for success and resource renewal up front, administrators can provide themselves with an exit from repeat competitions where the activity is popular with an important or influential constituency but is not (or no longer) generating the impact initially sought or where the policy issue being targeted has simply become less acute.

- How will success be measured? Perhaps most challenging of all is defining and tracking metrics for success. Activity metrics for inputs and outputs (number of participants, events held, and so forth) comparatively easy to measure and therefore frequently included in design. Much more challenging is to identify metrics which are truly outcomes-based. Smart designers will give significant thought to this piece of the puzzle and will sometimes even ‘outsource’ evaluation to an expert objective third party.

Conclusion: Why Should Anyone Care?

As discussed, challenge or prize-based competition models in the economic development arena are far from being a solution to every problem. However, with public resources increasingly being reduced (in particular at the federal and state levels) there is more pressure on localities to leverage external resources. A hyper-specialized world requires multiple parties (government, private sector, philanthropy, academia) to work together to solve our most intractable economic challenges, while the increased mobility of capital and talent in the tech-enabled knowledge economy mean competition for economic growth between jurisdictions is only intensifying. Taken together these factors argue strongly in favor of challenge models as another tool which should be at the disposal of economic developers and other interested parties. Like any tool, learning the basics is a good idea before attempting to use it in real life. This paper attempts to provide some general guidelines for how to get the most out of prize competition models and illustrates those guidelines in action through a review of their practical use in both the Bloomberg and the de Blasio administrations in New York City.

Bibliography

- Bloomberg, Michael R., “*My Economic Blueprint.*” Gotham Gazette, 2001.
- Bowles, Jonathan, and David Giles. “*New Tech City.*” Center for an Urban Future, May 2012.
- Marilyn M. Rubin. “*A Guide to New York State Taxes: History, Issues and Concerns.*”
- Brash, Julian, “*The Bloomberg Way: Development Politics, Urban Ideology, and Class Transformation in Contemporary New York City.*” CUNY Academic works, 2006.
http://academicworks.cuny.edu/gc_etds/1440
- Doblin Deloitte. “*The Craft of Incentive Prize Design.*” Deloitte University Press.
- Doctoroff, Daniel L., “*Greater Than Ever: New York’s Big Comeback.*” PublicAffairs, 2017
- Economist Newspaper. “*Win-Win.*” September 8, 2008
- Economic Development Curmudgeon (Blog), “*Bloomberg: the Neo-Liberal Economic Developer?*” Journal of Applied Research in Economic Development, Council for Community and Economic Research (c2er.org)
- Foley, Stephen. “The Power of Prizes to Encourage Innovation.” FT.com, September 2015
- Hendrix, Michael. “*The Power of Prizes: Incentivizing Radical Innovation.*” US Chamber of Commerce Foundation
- HR&A Advisors, “*The NYC Tech Ecosystem,*” first published 2014; revised & updated 2017.
- Moss, Mitchell L, “*How New York City Won the Olympics,*” NYU November 2011
- Parrott, James, “*New York City Taxes—Trends, Impacts and Priorities for Reform.*” Fiscal Policy Institute, January 13th, 2015
- Porter, Michael E. “*Clusters and the New Economics of Competition.*” Harvard Business Review, November-December 1998
- Porter, Michael E, Ketels, Christian, Ramirez-Vallejo, Jorge. “*New York City: Bloomberg’s Strategy for Economic Development.*” Harvard Business School Case Study 9-714-404 Rev. September 30, 2013
- Rubin, Marilyn M, “*A Guide to New York City Taxes: History, Issues and Concerns.*” John Jay College, 2011
- Sobel, Dava, “*Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time.*” New York: Walker, 1995

1. “Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time,” Dava Sobel, Walker, 1995
2. “The Laws of New York: Consolidated Laws Tax,” The New York State Senate, www.nysenate.gov/legislation/laws/TAX
3. “A Guide to New York State Taxes: History, Issues and Concerns,” Marilyn Marks Rubin, John Jay College, 2011. <http://pjsc.magikcms.com/Tax%20guides/StateGuideWeb.pdf>
4. “New York City Taxes — Trends, Impact and Priorities for Reform,” 2015, www.fiscalpolicy.org/wp-content/uploads/2015/01/NYC-Tax-Report-Jan-13-2015.pdf, page 58.
5. “Bloomberg Adds Six to His Team,” Diane Cardwell, New York Times 2001, www.nytimes.com/2001/12/29/nyregion/bloomberg-adds-six-to-his-team.html.
6. “The Five Borough Economic Opportunity Plan,” NYC Government www.nyc.gov/html/econplan/downloads/pdf/ceop_final.pdf
7. “Applied Sciences NYC,” NYC EDC, www.nycedc.com/project/applied-sciences-nyc
8. Arguing that stability and competent leadership was needed in the wake of the 2008 financial crisis, the Bloomberg Administration worked controversially but successfully with the NYC City Council to implement a one-time extension of term limits to three terms, allowing Bloomberg to run and ultimately be re-elected as Mayor in November 2009 for a third 4 year term.
9. “Mayor Bloomberg Announces City Received 18 Submissions From 27 Academic Institutions for New Applied Sciences Campus,” New York City Gov, 2011 www1.nyc.gov/office-of-the-mayor/news/088-11/mayor-bloomberg-city-received-18-submissions-27-academic-institutions-new
10. “Mayor Bloomberg Announces Carnegie Mellon University Will Open the Fourth New Applied Sciences Program in New York City as part of Applied Sciences NYC Competition,” New York City Government, 2013. www1.nyc.gov/office-of-the-mayor/news/376-13/mayor-bloomberg-carnegie-mellon-university-will-open-fourth-new-applied-sciences/#/0
11. “DiNapoli: New York City’s Tech Sector is Booming,” Office of the New York State Comptroller, 2017. www.osc.state.ny.us/press/releases/sept17/090817.htm
12. “Tech Takes Over” Greg David and Cara Eisenpress, Crains New York, 2018. www.crainsnewyork.com/article/20180226/FEATURES/180229939/new-york-is-the-tech-sectors-official-second-city-and-the-boom-is-just-beginning
13. “NYCx effort will be New York’s next pipeline for smart city innovation,” StateScoop, 2017 www.statescoop.com/nycx-is-new-yorks-next-pipeline-for-startup-invention
14. “Applied Life Sciences,” NYC EDC, www.nycedc.com/system/files/rfp/documents/applied_life_sciences_rfei_7224.pdf
15. “LifeSci NYC Internship Program,” www.lifesci.nyc.gov/lifesci-nyc-internship-program
16. “Challenge.gov,” www.challenge.gov/about/
17. “Hi it’s Amazon Calling, Here’s What We Don’t Like In Your City,” Shayndi Raice and Laura Stevens, Wall Street Journal, 2018. www.wsj.com/articles/hi-its-amazon-calling-heres-what-we-dont-like-in-your-city-1525253400n
18. “Amazon gets its new HQs but what do the winning cities stand to gain?” George Hammond, Financial Times, 2018. www.ft.com/content/8a584c36-ee76-11e8-89c8-d36339d835c0
19. “How Long Island City won over the city and then Amazon,” Greg David, Crains New York, 2018. www.crainsnewyork.com/greg-david-new-york/how-long-island-city-won-over-city-and-then-amazon
20. “Amazon in NYC: Many Aren’t Sold On the Idea” Noah Manskar, Patch, 2018. <https://patch.com/new-york/new-york-city/amazon-nyc-many-arent-sold-idea>
21. “Dear Amazon, New York Doesn’t Want You. Go Find Another City to Destroy,” Hamilton Nolan, The Guardian, 2018. www.theguardian.com/commentisfree/2018/nov/09/amazon-new-york-jeff-bezos-long-island-city