"The Value of Data: Consequences for Insight, Innovation, and Efficiency in the U.S. Economy"
A Study Commissioned by DMA's Data-Driven Marketing Institute (DDMI)
October 14, 2013

About the Study

- "The Value of Data: Consequences for Insight, Innovation and Efficiency in the U.S. Economy" is a first-of-its-kind study that quantifies the value of the Data-Driven Marketing Economy (DDME), both in terms of revenues generated for the U.S. economy and jobs fueled across the nation. Given that every industry in America relies on data-driven marketing, the results of this first-ever effort to systematically and objectively map, measure, and analyze the DDME will benefit anyone with an interest in a vital, efficient, and growth-producing marketplace for goods and services in the U.S.

- The study, undertaken by Professors John Deighton of Harvard Business School and Peter Johnson of Columbia University, describes the DDME as the economy of firms that exist to help U.S. companies use individual-level consumer data (ILCD) as an important ingredient in the "go to market" strategies by which they acquire and retain customers – in other words, increase demand for their goods and services.

- This study fills a significant gap in understanding about massive changes currently transforming the U.S. marketing and advertising industries – changes propelled by the growing quantity and variety of data available to businesses and consumers alike. It represents the most thorough, up-to-the moment, and theoretically-informed study yet undertaken of this little-known, but vital driver of the U.S. economy, asking two questions never before answered:
    - How much incremental value does data-driven marketing contribute to the U.S. economy?
    - How much of this value is accounted for by the flow or transfer of data among firms?

- DDMI commissioned this study to give policymakers in Washington and beyond the facts about the vital role of responsible data use in fueling innovation and economic growth, the benefits that the DDME provides to individual businesses and the U.S. economy as a whole – and what would be lost if regulation impeded responsible exchange of data across the DDME.

Key Findings from the Study

The DDME Generates Vital Revenue and Jobs for the U.S. Economy

- The DDME added $156 billion in revenue to the U.S. economy and fueled more than 675,000 jobs in 2012 alone.

- In California alone, the DDME fueled more than 90,000 jobs and provided more than $21 billion in revenue to the state's economy in 2012.

The Real Value of Data is in its Application – and Exchange across the DDME

- 70% of the value of the DDME – $110 billion in revenue and 478,000 jobs – depends on the ability of firms to exchange data across the DDME.

- In California alone, more than $10 billion in revenue and 46,000 jobs depend on the ability of firms to exchange data across the DDME.

- If markets had to operate without the ability to exchange data across the DDME, the U.S. economy would be significantly less efficient. U.S. companies would have to spend considerably more than $110 billion to maintain current output levels.

- These findings prove that the real value of data is in its application – and in its exchange across the DDME.

The Economic Impact of the DDME Could Be Even Greater

- Deighton and Johnson purposely used a conservative methodology – summing what firms spent on data and data services, not the benefits that they received in exchange – in order to be sure that their estimate of the size and value of the DDME was defensible. Thus, the reported size of the DDME likely understates its true size, as the report does not take into account:
    - Benefits that firms received in exchange for spending on data and data services, which commonly exceed data costs by 20% to 60%;
    - Spending on capital goods like server hardware and data storage systems, which is normally a multiple of revenues;
    - Funding of firms by venture investors, even when it was done in anticipation of future revenues; or
    - Benefits to end consumers of free-to-user Internet services.

The DDME is "Made in America" and Data-Driven Marketing is a Major U.S. Export

- The DDME is a uniquely American creation. Just as the U.S. created digital market-making media by commercializing the Internet browser in the 1990s, so it created postal market-making media when Montgomery Ward developed the mail order catalog in 1872.

- Today, data-driven marketing is a major export industry. The study's employment analysis confirms that the DDME is a Net (export) contributor to US economic well-being. DDME firms derive a considerable portion of their revenue abroad (sometimes upwards of 15%) while employing nearly all their workers in the U.S.

- The study confirms that the U.S. leads the world in data science applied to the marketplace. Ideas developed in the U.S. by American statisticians and econometricians, running on U.S.-designed hardware, and coded in algorithms developed and tested in the research offices of U.S. firms, are used to generate revenues throughout the world.

Innovation and Small Businesses Are the Biggest Winners in the DDME

- The exchange of data across the DDME enables small businesses to compete effectively with big players, launching innovative publications and services fueled by advertising revenue.

- Thanks to data, startups and small businesses today face lower barriers to market entry than they have since the 1870s. The data-driven marketing revolution has eased access to advertising, and advertising-dependent capital. Products and publications that deliver value to users can be launched and grow at a pace unchecked by the need to find a large pool of customers willing to make immediate payment for the value they receive, because entrepreneurs and investors have

confidence that customers or audience can be built incrementally, and when they build over time, thy eventually have value to advertisers.

- Data also gives small businesses a leg-up in matching of products to customers. The advent of low cost or open source Web scale analytics software means that data intensive market insights are now more accessible to mid and smaller size enterprise. The benefits of the data revolution are being distributed across the economy (not just to larger enterprises) – and enterprises that better know their own customers add to the value/efficiency of the DDME.

- The emergence of specialized data providers, supplying specialized, derived or 'modeled' data, means that barriers to entry for specialized niche offerings, for niche producers, are lower.

Data-Driven Marketing Creates Consumer-Driven Companies (Pro-Data = Pro Consumer)

- The flow of data throughout the DDME is forcing traditional producer-centric firms to become increasingly customer-centric. In the old days, in the words of Henry Ford, customers could have any color car they wanted, so long as it was black. In the DDME, a firm is less a collection of capital assets than a portfolio of loyal customers whose support is expensive to acquire, difficult to maintain.

- Data-driven marketing is now about discerning what customers want and need and engineering the company to provide it. The more firms can use data to develop a 360 degree, multi-channel view of what customers think and want, the more the customer will truly be king.

- The exchange of data enables small businesses to compete effectively with big players, allowing new market entrants to challenge mature players. And with big companies less likely to take their large base of existing customers for granted, consumer choice and power is enhanced.

Online Data Flows Are Still Nascent, but Offline Experience Suggests Massive Future Growth

- A large part of the DDME is still found in the off-line, non-digital economy. Today, data-driven marketers still spend more on the postal channel than all digital channels combined. In the current DDME, data is equally vital "offline" where the cost of interaction with a customer is much higher.

- "Digital" is still a nascent part of the DDME, with significant potential still to be unlocked in terms of revolutionizing the world of advertising – and the growth of direct mail may foretell digital growth. Prior to the 1970s, direct mail was a comparatively small and relatively less important part of the overall postal economy. Today, over 85% of advertising mail is individually targeted. It is entirely possible that data-driven digital advertising will "grow up" in a similar manner in the not too distant future.

Responsible Use of Data = Efficient Marketing = Efficient Economic Markets

- Responsible use of data by marketers has revolutionized one of the most costly aspects of doing business in any industry. Marketing accounts for a huge portion of the cost of doing business – the cost of interacting with consumers is very substantial, perhaps representing as much as 11% of all revenue for American businesses today, according to the CMO Survey produced by Duke University.

- By acquiring data, and using it for segmentation, targeting and measurement, marketers aim to reduce expenditures on non-valuable interactions as close as possible to zero, while ensuring that the expenditures they do make maximize the number of valuable interactions. The efficiency derived from smart use of data makes the process of marketing significantly more efficient – which makes the overall US economy more efficient in how it brings goods and services to market.

- If markets had to operate without the ability to exchange data across the DDME, the U.S. economy would be significantly less efficient. U.S. companies would have to spend considerably more than $110 billion to maintain current output levels.

DMA Analysis: What Does the Study Mean for Policymakers in Washington and Beyond?

Regulatory Debates about the Use of Data Should be based on Facts about the Value of Data

- In recent months, legislators and regulators have shown a keen interest in understanding how data is used within the DDME. The House Privacy Caucus opened an inquiry into "data brokers" in August 2012. The Senate Commerce Committee opened an investigation into "data brokers" in October 2012. The Federal Trade Commission (FTC) opened its own "data broker" investigation in December 2012. The Government Accountability Office (GAO) is currently undertaking a study of information resellers," commissioned by Senator Jay Rockefeller, Chairman of the Senate Commerce Committee. The Senate Commerce and FTC investigations are on-going.

- With the release of this study, policymakers in Washington and beyond have the facts about the vital role of responsible data use in fueling innovation and economic growth, the benefits that the DDME provides to individual businesses and the U.S. economy as a whole – and what would be lost if regulation were to impede the responsible exchange of data across the DDME.

- DMA calls on policymakers to base any future regulatory debate about the use of data on these important findings about the value that the DDME provides to the U.S. economy in terms of revenue and jobs.

Regulation Would Impact Innovation, Small Businesses, Jobs and Economic Growth.

- New regulations stopping the exchange of data across the DDME would impact $110 billion in revenue to the U.S. economy and 478,000 American jobs.

- The biggest winners in the DDME – innovation and small businesses – would also be the biggest losers if startups could no longer use data to overcome barriers to entry, raise ad-supported revenue, and identify new and niche markets to serve.

The Bottom Line: Well-Meaning but Poorly-Conceived Legislation or Regulation Restricting the Responsible Use of Data Would Harm the U.S. Economy.

- It would impact billions of dollars in revenue and hundreds of thousands of jobs, make small business less competitive, and stifle innovation.

- In the end, it would hurt consumers by limiting choices and raising prices.