

ORIGINAL RESEARCH

Open access

Enterprise Data Reuse as a Digital Business Capability: A Theory of Repurposing Customer, Operational, and Transactional Data for Value Renewal

Victor Moreno^{1*}, Daniela Ruiz², Andres Salazar¹

Abstract

Firms now collect vast quantities of customer, operational, and transactional data through digital platforms, enterprise systems, service encounters, logistics infrastructures, and payment architectures. Yet much of this data is used only for its immediate operational purpose and then stored, fragmented, or ignored. This creates a strategic paradox: data abundance does not automatically produce value abundance. Existing theories of digital business value have largely emphasised data collection, analytics capability, governance, and decision support. These perspectives explain how firms analyse data for predefined purposes, but they do not fully explain how firms systematically repurpose existing data assets for new uses. This leaves an important gap in understanding how data becomes renewable rather than merely accumulated. This article conceptualises enterprise data reuse as a distinct digital business capability. It defines data reuse as the organisational capacity to identify data already collected, prepare it for a new context, recombine it with other data assets, and apply it to new business problems, products, services, or strategic insights. The article develops a theory of how customer, operational, and transactional data can be repurposed to support value renewal. The article contributes by positioning data reuse as a higher-order capability rather than a secondary analytics activity. It argues that firms able to renew the value of existing data can generate new revenue opportunities, reduce the marginal cost of innovation, and strengthen strategic adaptability. Enterprise data reuse therefore transforms data from a one-time input into a renewable strategic asset.

Keywords Customer data, Value renewal, Enterprise data reuse, Digital business capability, Operational data, Transactional data

*Correspondence:

Victor Moreno

victor.moreno@ub.edu

¹ Department of Digital Business Analytics, Faculty of Economics, University of Barcelona, Barcelona, Spain

² Department of Strategic Management and Innovation, Faculty of Business, Autonomous University of Madrid, Madrid, Spain

Introduction

Digital firms increasingly operate under conditions of data abundance, where customer interactions, operational processes, and transactional events continuously produce digital traces. Big data analytics research has shown that firms can convert such data into performance gains when they possess suitable analytical and organisational capabilities [1]. However, the mere accumulation of data does not guarantee strategic value, because many firms

continue to use data narrowly for the original process that generated it.

This article begins from the paradox that organisations invest heavily in data collection, data infrastructure, and analytics while allowing large portions of existing data to remain underused. Prior studies have demonstrated that big data can support strategic value creation, decision quality, and organisational performance [2, 3]. Yet these contributions often focus on extracting insight from data for

a defined business objective rather than explaining how data can be repurposed across changing objectives.

The central theoretical problem is that data is frequently treated as an input to analytics rather than as a reusable strategic resource with an extended value lifecycle. Research on digital innovation emphasises the generativity and recombining of digital resources, suggesting that existing digital objects can support new forms of innovation beyond their original design [4]. This logic is especially relevant to enterprise data, because customer, operational, and transactional datasets can be recombined to produce new services, process improvements, predictive models, and strategic insights.

The central question addressed in this article is how firms can develop a systematic capability to repurpose existing data for new value creation. Building on research on data-driven performance, digital transformation, and business analytics capabilities, this article theorises enterprise data reuse as a distinct digital business capability [5, 6]. Its aim is to explain how firms move from data possession to data reuse, and from data reuse to value renewal and sustained digital business advantage.

Theoretical Background

The resource-based view provides an important starting point for theorising enterprise data reuse because it explains how firms gain advantage from resources that are valuable, rare, difficult to imitate, and organisationally embedded. Data differs from many physical resources because it is non-depleting: using a dataset for one purpose does not necessarily exhaust its potential for another purpose. Studies of big data analytics and firm performance show that value emerges not only from data volume but also from the firm's ability to organise, analyse, and deploy data in ways that competitors cannot easily replicate [1, 2].

Knowledge-based and knowledge management perspectives extend this logic by emphasising that value is created when information and knowledge are combined, interpreted, and applied in new contexts. Research on big data and knowledge management shows that analytics capabilities can strengthen performance when firms integrate data with organisational knowledge and decision routines [7]. Enterprise data reuse therefore depends not only on technical access to stored data, but also on the

organisational capacity to reinterpret what existing data can mean in a different business problem.

Dynamic capability theory further clarifies why data reuse should be understood as an adaptive capability rather than a static resource stock. Digital transformation research argues that firms must continually reconfigure resources, processes, and business models as digital environments change [8, 9]. From this perspective, enterprise data reuse is a capability for reconfiguring the meaning and application of data assets as new opportunities, threats, and strategic questions emerge.

Despite these theoretical foundations, existing literature has not fully integrated resource-based, knowledge recombination, and dynamic capability perspectives into a theory of enterprise data reuse. Data governance research explains how data can be controlled and made reliable, while analytics research explains how data can support insight generation [10, 11]. What remains undertheorised is the organisational capability through which data collected for one purpose becomes useful for another purpose, thereby renewing its strategic value.

Enterprise Data Reuse as a Digital Business Capability

Enterprise data reuse can be defined as the organisational ability to identify data already collected, assess its potential relevance beyond its original purpose, prepare it for new use, recombine it with other data assets, and apply it to new business problems or opportunities. This definition builds on research that treats big data analytics capability as a multidimensional organisational capability rather than a purely technical function [12]. However, data reuse is narrower and more strategic than general analytics because it focuses specifically on renewing the value of data that already exists inside the firm.

The first dimension of data reuse is identification, which concerns the firm's ability to discover latent value in existing data assets. Many organisations possess customer support logs, service records, transaction histories, process timestamps, sensor readings, and behavioural traces that were originally collected for operational reasons. Strategic value emerges when managers recognise that these datasets can be redirected toward new innovation, prediction, segmentation, or process redesign purposes,

consistent with the broader literature on creating business value from big data [3].

The second and third dimensions are preparation and recombination. Preparation involves cleaning, contextualising, documenting, governing, and transforming data so that it can be safely and meaningfully used in a new setting, while recombination involves connecting data across domains to generate insights that no single dataset could provide alone. Information governance is therefore not separate from reuse capability; it enables reuse by improving data quality, accountability, accessibility, and interpretability [10].

The fourth dimension is application, through which repurposed data is translated into new services, operational improvements, revenue opportunities, or strategic decisions. This distinguishes enterprise data reuse from passive data storage and from analytics performed only for predefined reporting needs. Table 1 defines the key dimensions and sub-capabilities of enterprise data reuse.

Table 1. Dimensions of Enterprise Data Reuse as a Digital Business Capability: Identification, Preparation, Recombination, and Application

Dimension of enterprise data reuse	Core theoretical meaning	Key sub-capabilities	Strategic contribution
Identification	Recognising that existing customer, operational, or transactional data may have value beyond its original collection purpose	Data asset mapping; latent-use recognition; metadata interpretation; opportunity scanning; cross-functional data visibility	Converting archived routine data into a visible strategic resource

Preparation	Making existing data fit for a new analytical, operational, or commercial purpose	Data cleaning; contextual documentation; governance alignment; privacy review; quality assessment; semantic standardisation	Reducing friction, risk, and ambiguity when data is moved into new contexts
Recombination	Connecting multiple data sources to generate new meanings, relationships, or predictive possibilities	Customer-operational linking; transaction-behaviour matching; process-event integration; feature engineering; knowledge recombination	Creating insights that cannot be produced from isolated datasets
Application	Deploying reused data in a new business problem, product, service, process, or strategic decision	New service design; process innovation; predictive modelling; personalisation; cross-selling; business model experimentation	Translating reused data into valuable renewal and digital business advantages

Customer, Operational, and Transactional Data Repurposing

Customer data reuse begins with the recognition that behavioural traces, preference signals, support interactions, complaint narratives, service histories, and engagement patterns are not limited to their original customer management purpose. Digital transformation research shows that customer-facing digital resources can support broader strategic renewal when firms reinterpret them across business functions [8, 13]. In the proposed theory, customer data becomes reusable when it is shifted from a record of past interaction to a resource for new

service design, personalisation, segmentation, and relationship innovation.

Customer data repurposing also depends on the firm's ability to translate interaction data into market learning. Data-driven marketing research suggests that firms can use customer and market data to improve targeting, growth, and profitability when data is connected to strategic decision processes [14]. This means that customer support logs may be reused to identify unmet needs, loyalty data may be reused to design new bundles, and behavioural profiles may be reused to create more adaptive customer experiences.

Operational data reuse involves the repurposing of process, logistics, production, service delivery, sensor, and workflow data for new operational and strategic purposes. Studies of big data analytics have shown that operational performance benefits arise when firms connect data analytics to decision routines and organisational capabilities [6, 15]. In this theory, operational data is reusable when it moves beyond monitoring efficiency and becomes an input for predictive maintenance, capacity redesign, process innovation, and resilience planning.

Transactional data reuse refers to the repurposing of order histories, payment records, purchase sequences, invoice patterns, return behaviour, and settlement information for new predictive and commercial uses. Research on analytics-enabled market agility suggests that transaction and market data can help firms identify new product opportunities and respond more quickly to changing demand [16]. Transactional data therefore renews value when it is reused for cross-selling, credit evaluation, churn prediction, fraud pattern recognition, revenue forecasting, and business model experimentation.

Value Renewal through Data Reuse

Value renewal through data reuse occurs when data that has already served one operational or analytical purpose is made productive again in a new context. This differs from conventional value extraction because the firm does not begin by collecting new data; it begins by reinterpreting and redeploying data that already exists. Research on realising value from big data shows that firms must overcome organisational, interpretive, and implementation challenges

before data can be converted into sustained business value [17].

The first pathway of value renewal is lifecycle extension, where data continues to generate value beyond the moment of its original capture. Critical analyses of big data challenges show that data value is constrained by quality, analytical method, privacy, integration, and interpretability issues [18]. Enterprise data reuse capability addresses these constraints by preparing and contextualising old or routine data so that it can support new analytical questions, business decisions, or innovation projects.

The second pathway is revenue renewal, where reused data supports new products, services, monetisation models, or data-based offerings. Research on data monetisation and data-based business models shows that firms can generate new forms of economic value when data is packaged, embedded, or transformed into business offerings [19]. Table 2 illustrates how different data reuse patterns lead to value renewal mechanisms.

Table 2. Data Reuse Patterns and Value Renewal Mechanisms: Mapping Customer, Operational, and Transactional Data to New Value Propositions

Data domain	Original data purpose	Reuse pattern	Value renewal mechanism
Customer data	Recording interactions, preferences, feedback, service requests, complaints, and engagement behaviour	Repurposing behavioural and relational traces for new service design, personalisation, retention, and customer insight	Converts past interaction data into new relationship value, experiential improvements, and service innovation
Operational data	Monitoring processes, logistics, production flows, service delivery,	Repurposing process and sensor data for prediction, redesign, automation,	Converts routine operation records into process intelligence

	equipment status, and workflow performance	resilience, and efficiency innovation	and adaptive operation capabilities
Transactional data	Capturing purchases, payments, orders, returns, invoices, settlement events, and revenue flows	Repurposing purchase and payment histories for prediction, cross-selling, credit assessment, pricing, and revenue modelling	Convert complete transaction records into future-facing commercial intelligence
Combined data reuse	Managing each data type separately for its initial administrative or analytical function	Recombining customer, operational, and transactional data across domains	Creates higher-order insights than no single dataset could generate independently

The third pathway is innovation renewal, where data reuse reduces the marginal cost and time required to experiment with new ideas. Research on big data analytics capabilities and innovation shows that analytics can support innovation through dynamic capabilities and environmental responsiveness [20]. When firms reuse existing data, they can test new value propositions, evaluate demand patterns, and refine digital offerings without starting every innovation cycle with new data collection.

Digital Business Advantage

Enterprise data reuse creates digital business advantage by helping firms generate differentiated insights from data combinations that are unique to their history, customers, processes, and transactions. Research on digital resources and strategic initiatives argues that digital advantage depends on how firms define, configure, and mobilise digital resources in strategy [21]. Reused data becomes

strategically valuable when it reflects firm-specific activity patterns that rivals cannot easily observe or replicate.

A second advantage arises from cost efficiency. Firms with stronger reuse capability can reduce dependence on repeated data collection, external data purchasing, and redundant analytics projects because existing data can be redirected toward new questions. Research on decision-making quality shows that big data analytics usage can improve organisational decisions when data is effectively mobilised across decision contexts [22].

A third advantage is agility, because firms that can reuse existing data are able to respond faster to market shifts, operational disruptions, and customer behaviour changes. Digital transformation scholarship highlights that firms must continuously adapt resources and processes as technologies, customers, and competitive conditions evolve [9, 13]. Enterprise data reuse supports this adaptation by making existing data quickly available for new strategic interpretation.

A fourth advantage lies in reinforcing data-network effects and learning loops. As firms reuse data across more business problems, they improve their understanding of data quality, integration pathways, governance constraints, and recombination opportunities. This cumulative learning strengthens the organisational foundation for future reuse, making the capability more difficult for competitors to imitate than isolated analytics tools or one-time data projects [1, 3].

Proposed Theoretical Logic

The proposed theoretical logic begins with enterprise data reuse capability, composed of identification, preparation, recombination, and application. Identification makes existing data visible as a potential resource, preparation makes it usable in a new setting, recombination makes it generative, and application converts it into a new business outcome. This logic extends research on big data analytics capabilities by shifting attention from analytics execution to the prior organisational ability to redeploy existing data across purposes [11, 12].

The second link in the theory connects enterprise data reuse capability to data repurposing across customer, operational, and transactional domains. Customer data is repurposed for new service and relationship value, operational data for process and efficiency innovation, and

transactional data for predictive and commercial renewal. Research on consumer goods innovation in the digital age shows that firms can innovate when analytics capabilities are connected to data-driven opportunity recognition [23].

The third link connects data repurposing to value renewal. Reused data renews value by extending the useful life of data, reducing the cost of experimentation, enabling data-based business models, and supporting faster strategic adaptation. Research on business model innovation shows that big data analytics capabilities can influence innovation outcomes when they are embedded in entrepreneurial and strategic orientation [24].

The fourth link connects value renewal to digital business advantage, moderated by data quality, integration complexity, governance maturity, and organisational culture. Board-level and organisational governance research on secondary data use indicates that oversight, accountability, and governance structures shape whether data can be reused responsibly and effectively [25]. Thus, the theory predicts that data reuse capability creates advantage most strongly when firms combine technical integration with governance, cross-functional learning, and strategic openness to repurposing.

Figure 1 presents the proposed theoretical logic of enterprise data reuse as a digital business capability that transforms existing customer, operational, and transactional data into value renewal and digital business advantage.

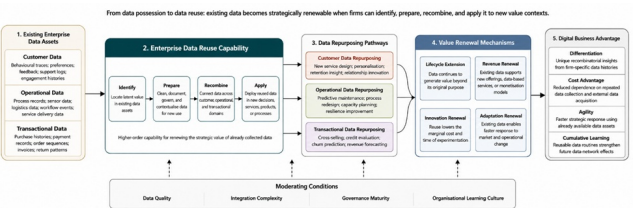


Figure 1. Enterprise Data Reuse Capability and Value Renewal: A Theoretical Model of Data Repurposing for Digital Business Advantage

Research Propositions

The first proposition is that the level of enterprise data reuse capability is positively associated with the rate of new value generation from existing data assets. This proposition follows from the argument that firms with stronger identification, preparation, recombination, and application routines can convert dormant or single-use data into renewed business value. Prior research linking analytics

capabilities to firm performance supports the broader logic that organisational capabilities around data influence performance outcomes [5, 6].

The second proposition is that data recombination capability mediates the relationship between data reuse capability and value renewal. Firms may identify and prepare existing data, but renewed value is most likely when data can be recombined across customer, operational, and transactional domains to create new meanings. This proposition is consistent with digital innovation research, which emphasises recombination and generativity as central mechanisms through which digital resources support innovation [4].

The third proposition is that data integration complexity negatively moderates the relationship between enterprise data reuse capability and value renewal, such that the relationship is weaker when data is fragmented, poorly governed, or semantically inconsistent. Conversely, governance maturity and organisational learning should strengthen the relationship by making reused data more trustworthy, interpretable, and actionable. This proposition builds on research showing that information governance and knowledge management are central to converting data resources into innovation and performance outcomes [7, 10].

Conclusion

This article has developed a theory of enterprise data reuse as a distinct digital business capability. It reconceptualises data not as a one-time input to analytics, but as a renewable strategic resource whose value can be extended through identification, preparation, recombination, and application. The theory explains how firms can repurpose customer, operational, and transactional data to generate value renewal and digital business advantage.

The central contribution is to shift attention from data possession and data analysis toward data reuse as a higher-order organisational capability. Firms do not gain sustained advantage merely because they collect more data or deploy more analytics tools. They gain advantage when they can repeatedly reinterpret and redeploy existing data assets for new services, processes, revenue models, and strategic insights.

For managers, the theory implies that data reuse should be designed into digital business strategy, governance

systems, data architecture, and innovation routines. For researchers, it opens a pathway for empirical testing of reuse capability, recombination mechanisms, value renewal outcomes, and boundary conditions such as data quality, integration complexity, and organisational culture. Enterprise data reuse is therefore a promising theoretical lens for understanding how digital firms renew value from resources they already possess.

Acknowledgements

None

Conflict of interest

None

Financial support

None

Ethics statement

None

Received: 10 Jun 2026 Revised: 25 Jul 2026 Accepted: 10 Sep 2026
Published online: 18 September 2026

Rights and permissions

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Wamba SF, Gunasekaran A, Akter S, Ren SJ, Dubey R, Childe SJ. Big data analytics and firm performance: Effects of dynamic capabilities. *J Bus Res.* 2017;70:356-65.
- Côrte-Real N, Oliveira T, Ruivo P. Assessing business value of big data analytics in European firms. *J Bus Res.* 2017;70:379-90.
- Grover V, Chiang RH, Liang TP, Zhang D. Creating strategic business value from big data analytics: A research framework. *J Manag Inf Syst.* 2018;35(2):388-423.
- Nambisan S, Lyytinen K, Majchrzak A, Song M. Digital innovation management: Reinventing innovation management research in a digital world. *MIS Q.* 2017;41(1):223-38.
- Mikalef P, Boura M, Lekakos G, Krogstie J. Big data analytics and firm performance: Findings from a mixed-method approach. *J Bus Res.* 2019;98:261-76.
- Mikalef P, Krogstie J, Pappas IO, Pavlou P. Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Inf Manag.* 2020;57(2):103169.
- Ferraris A, Mazzoleni A, Devalle A, Couturier J. Big data analytics capabilities and knowledge management: Impact on firm performance. *Manag Decis.* 2019;57(8):1923-36.
- Verhoef PC, Broekhuizen T, Bart Y, Bhattacharya A, Dong JQ, Fabian N, et al. Digital transformation: A multidisciplinary reflection and research agenda. *J Bus Res.* 2021;122:889-901.
- Warner KS, Wäger M. Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Plann.* 2019;52(3):326-49.
- Mikalef P, Boura M, Lekakos G, Krogstie J. The role of information governance in big data analytics driven innovation. *Inf Manag.* 2020;57(7):103361.
- Mikalef P, Pappas IO, Krogstie J, Pavlou PA. Big data and business analytics: A research agenda for realizing business value. *Inf Manag.* 2020;57(1):103237.
- Mikalef P, Pappas IO, Krogstie J, Giannakos M. Big data analytics capabilities: A systematic literature review and research agenda. *Inf Syst EBus Manag.* 2018;16(3):547-78.
- Vial G. Understanding digital transformation: A review and a research agenda. *Managing digital transformation.* 2021:13-

66.

Grandhi B, Patwa N, Saleem K. Data-driven marketing for growth and profitability. *Euro Med J Bus.* 2021;16(4):381-98.

Müller O, Fay M, Vom Brocke J. The effect of big data and analytics on firm performance: An econometric analysis considering industry characteristics. *J Manag Inf Syst.* 2018;35(2):488-509.

Hajli N, Tajvidi M, Gbadamosi A, Nadeem W. Understanding market agility for new product success with big data analytics. *Ind Mark Manag.* 2020;86:135-43.

Günther WA, Mehrizi MH, Huysman M, Feldberg F. Debating big data: A literature review on realizing value from big data. *J Strateg Inf Syst.* 2017;26(3):191-209.

Sivarajah U, Kamal MM, Irani Z, Weerakkody V. Critical analysis of Big Data challenges and analytical methods. *J Bus Res.* 2017;70:263-86.

Parvinen P. Advancing data monetization and the creation of data-based business models. *Commun Assoc Inf Syst.* 2020;47(1):2.

Mikalef P, Boura M, Lekakos G, Krogstie J. Big data analytics capabilities and innovation: the mediating role of dynamic capabilities and moderating effect of the environment. *Br J Manag.* 2019;30(2):272-98.

Piccoli G, Rodriguez J, Grover V. Digital strategic initiatives and digital resources: Construct definition and future research directions. *MIS Q.* 2022;46(4):2289-316.

Li L, Lin J, Ouyang Y, Luo XR. Evaluating the impact of big data analytics usage on the decision-making quality of organizations. *Technol Forecast Soc Change.* 2022;175:121355.

Mariani MM, Wamba SF. Exploring how consumer goods companies innovate in the digital age: The role of big data analytics companies. *J Bus Res.* 2020;121:338-52.

Ciampi F, Demi S, Magrini A, Marzi G, Papa A. Exploring the impact of big data analytics capabilities on business model innovation: The mediating role of entrepreneurial orientation. *J Bus Res.* 2021;123:1-3.

Black S, Davern M, Maynard SB, Nasser H. Data governance and the secondary use of data: The board influence. *Inf Organ.* 2023;33(2):100447.