Соціологія

UDC 316.77:004.738.5:658.012.2

Novosel Serhii

eCommerce Automation Expert,

Graduate in Economic Cybernetics and Information Management,

7 figure Amazon Seller,

«Entrepreneur of the 2021 year» by UBA

FROM SOCIAL GRAPHS TO SALES FUNNELS: A SYSTEMATIC APPROACH TO ECOMMERCE NETWORKS

Summary. *This article explores the integration of systemic modeling principles, commonly used in network analysis, into the realm of eCommerce. Drawing from sociological, technological, and organizational frameworks, the paper adapts classical network case studies to the digital commerce environment. Concepts like weak ties, startup ecosystems, and semantic communication networks are examined in the context of Amazon FBA, CRM analytics, supplier ecosystems, and automation workflows. Using comparative charts and industry-specific scenarios, we argue that the systematic approach—when applied to eCommerce—enables exponential business resilience and growth.*

Key words: *eCommerce, network analysis, system modeling, CRM, startup ecosystems, weak ties, Amazon, ebay, walmart, marketplace, digital commerce.*

Actuality / Relevance. As global commerce transitions into a digital-first landscape, the architecture of market interactions increasingly mirrors social, semantic, and technological networks. Applying systems thinking, historically used

in sociology and computing, to online marketplaces offers practical frameworks for scalable automation, improved customer targeting, and vendor coordination.

Discourse

1. Networks and Markets

Mark Granovetter's "strength of weak ties" (fig. 1) concept highlights that valuable information often flows through distant social links [1]. In eCommerce, weak ties between small suppliers and global sellers enable access to non-public product opportunities. For example, an Amazon wholesaler may find unique SKUs through a minor distributor—a tie less likely explored by larger retail chains. In this context, graph mapping tools can reveal underutilized relationships across distributor networks.

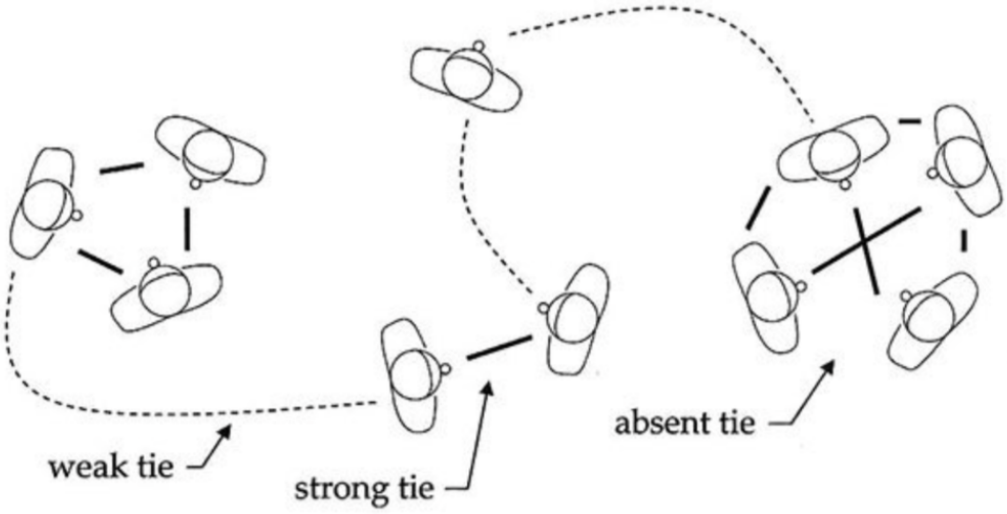

Fig. 1. «Strength of weak ties» Summary of Mark Granovetter perspective

Table 1

«Strength of weak ties» Summary of Mark Granovetter perspective on eComm instance

Tie Type	eCommerce Equivalent	Business Value
Strong Tie	Existing supplier contracts	Reliable, but potentially saturated options
Weak Tie	Cold outreach to niche brands	Unique sourcing, higher ROI

2. Startup Ecosystems and Cluster Resilience

The Atlanta cybersecurity startup map, referenced in the source article, illustrates how prior employment creates company clusters [4]. In Amazon FBA, similar clustering occurs when former team members start parallel ventures, share sourcing methods, or cross-train virtual assistants. A seller who exits the business may mentor others, building a feedback loop of innovation. This ecosystem effect is comparable to the PayPal in Silicon Valley [4].

3. Semantic Email Networks and CRM Optimization

Russell Jurney's email mapping algorithm, later used in RelateIQ and acquired by Salesforce, demonstrates how inbox interactions can be visualized into CRM insights [2]. Applying this to Amazon seller operations, automated Gmail parsing identifies vendor relations, tracks quote trends, and populates procurement data into spreadsheets. This reduces input labor and improves negotiation cycles.

4. Visualizing CRM and Vendor Data

Vendor networks, especially for large-scale inventory, resemble the Hadoop vendor graph shown in the original article [3]. Amazon sellers using Cloudera, MapR-style (Fig. 2) thinking can visualize which brands overlap in distributor

catalogs. With enough data, these clusters guide reorder strategies or even private-label product opportunities based on supply chain density (Table 2).

Table 2

Comparison on personal experience along with Indexing and Clustering

Vendor Name	Shared Brand Index	Opportunity Zone
XYZ Supply	85% overlap w/ ABC	Co-sourcing
ABC Distributors	40% unique brands	Niche exclusivity

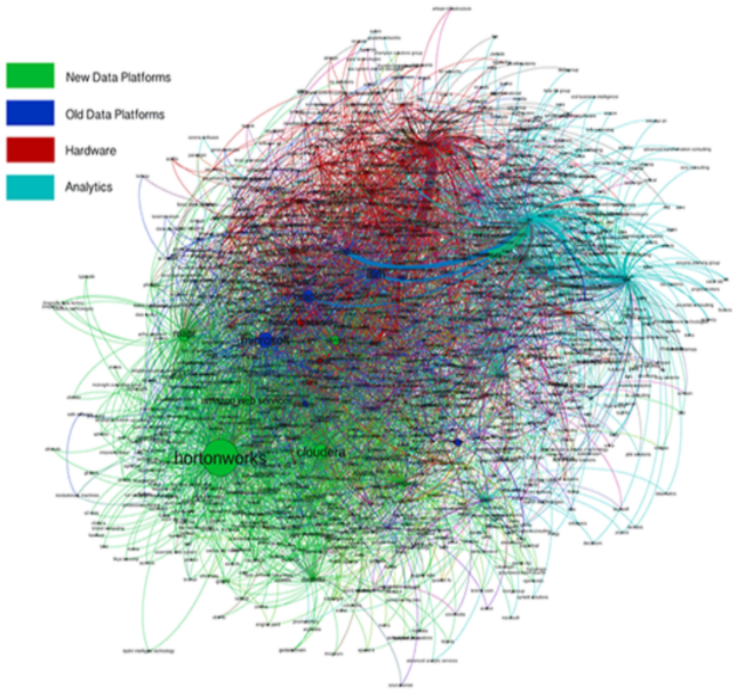

Fig. 2. Map-R Overlap, Cluster connections Cloudera example

Conclusion. Systematic thinking—originally rooted in network sociology—applies powerfully to digital commerce. Weak ties become sourcing tools. Startup ecosystems evolve into supplier- vendor partnerships. Semantic inbox data becomes

CRM gold. Ultimately, any transactional process in eCommerce can be modeled as a network. When structured correctly, these models self-optimize, turning patterns into scalable systems.

Literature

1. Granovetter, M. (1973). "The Strength of Weak Ties." *American Journal of Sociology*, 78(6), 1360–80.

2. Jurney, R. (2013). *Agile Data Science*. O'Reilly Media.

3. Newman, M. E. J. (2010). *Networks: An Introduction*. Oxford University Press.

4. Barabási, A.-L. (2002). *Linked: The New Science of Networks*. Perseus Publishing.