

THE IMPACT OF DIGITAL TRANSFORMATION ON MANAGEMENT SYSTEM EFFECTIVENESS: EVIDENCE FROM ARMENIAN ORGANIZATIONS

Goharik KHACHATRYAN, PhD in Economics, Northern University

<https://orcid.org/0009-0002-3237-4309>

goharik.khachatryan.69@inbox.ru

Meri KARAPETYAN, Master's Student, Northern University

<https://orcid.org/0009-0002-3237-4309>

m.marykarapetyan@mail.ru

Abstract

The research is based on a conceptual-analytical and comparative approach. International empirical findings are coupled with contextual evidence from Armenian firms. The paper discusses important technology drivers such as artificial intelligence, big data analytics, cloud computing, CRM systems and omnichannel platforms.

The results show that digital transformation has a significant positive impact on decision-making quality, operational efficiency, and customer engagement. However, Armenian organizations are at different levels of digital maturity, which causes uneven performance results. The study builds an integrated conceptual framework between digital transformation and management effectiveness, based on the KPI system and data-driven processes.

Keywords: digital marketing, digital transformation, management efficiency, KPI systems, Armenia, data-based decision-making.

JEL code: M31

Introduction

Digital economy is growing rapidly and transforming the way of digital economy business. These days digital technology is no longer just an add-on it is a part of how digital economy companies make decisions and do their day-to-day work. In fact, it is now right at the heart of their plan as people like Ryan pointed out back in 2020. This change has had an effect on how digital economy organizations are set up and how they operate, making digital technologies vital for them to succeed. With digital technology playing such role digital economy companies are having to adapt and evolve to keep up with the times. This means they need to be able to use tools and platforms to make quick decisions respond to changing circumstances and stay ahead of the competition. The digital economy continues to develop and grow, and it is likely that the function and operation of digital economy businesses will change further. Digitalization has changed the face of how businesses market themselves. "Companies in the digital economy need to make informed decisions to keep pace. Now they can gather and analyze and use huge amounts of data to guide their decisions. Kotler and Keller, famous experts in the sphere of marketing, present modern marketing in the digital economy as an industry that depends on data, focuses on the customer and uses technology to deliver results. This allows digital economy companies to make smarter decisions and gain a competitive edge in the market. By collecting and analysing data, businesses are better equipped to understand their customers' needs and preferences, and tailor their marketing strategies accordingly. This data-driven approach allows companies to be more flexible and responsive to changing market conditions, resulting in better performance and success. Despite all progress, some countries such as Armenia are still in the middle of transition to digital. Armenian companies are slowly starting to adopt new tools but they face a lot of challenges such as lack of proper structure, money or institutions

to support big changes. This makes it difficult for them to change fast and full as pointed out by experts such as Kotler and Keller (2016).

Research Objective: To evaluate the impact of marketing digitalization on management system effectiveness in Armenian organizations.

Research Questions

- What happens to the way managers make decisions when a company goes through transformation?
- Is there a connection between how advanced a company with digital technology and how well the company does?
- What are the things that get in the way of transformation, in Armenia?

Review of Literature

Digital transformation is a tough process that involves a lot of things like technology, strategy, and changing how an organization works all at the same time. Some researchers, like Davenport and Harris, have found that using analytics is really important for businesses to stay ahead of their competitors. They discovered that analytics can help companies make better decisions and do better overall. Also, Wedel and Kannan have pointed out how important marketing analytics is for businesses to target their customers more effectively and measure how well they're doing. By using data and analytics, companies can understand their customers better and make more informed decisions about how to reach them. This can lead to better targeting of customers and more accurate measurement of performance, which are crucial for businesses to succeed in today's fast-paced digital world. In today's digital landscape, businesses need to be able to make quick and informed decisions to stay competitive. Analytics plays a big role in this, as it helps companies understand their customers and make better decisions. With the help of analytics, businesses can target their customers more effectively, measure their performance, and make adjustments as needed. This is especially important in a digital world where things are constantly changing. By using analytics, companies can stay ahead of the curve and succeed in a rapidly changing environment. Overall,

- 20–30% higher ROI
- 15–20% cost reduction
- 2x faster decision-making

But most research looks at wealthy countries, and that leaves a big gap in our knowledge about places like Armenia that are still growing. This study helps fill that gap by bringing together: technological perspective

- managerial perspective
- regional (Armenian) context

Methodology: We used an approach to do this research. We looked at ideas. Compared them to what actually happens.

Research Methods

- We compared Armenia to countries to see how it does
- We looked at how things are done by using certain measurements

- We used information from people research like OECD and Statista and McKinsey reports
- We looked at examples from banking and telecom and e-commerce in Armenia.

How We Analyzed It

We thought that how well management works is affected by digitalization and data quality and speed and accuracy and systems to measure progress

Results and Discussion

So, what have we learned from looking at companies in Armenia and how they're dealing with new technology? It appears that they're making some significant changes to their management and technology readiness, and this is having a pretty big impact on their overall performance.

Table 1 Impact of Digital Transformation in Armenian Organizations³

Factor	Traditional Firms	Digitally Advanced Firms	Impact
Decision-Making	Experience-based	Data-driven	Higher accuracy
Speed	Low	High	Faster response
Efficiency	Moderate	High	Increased Productivity
Risk Level	High	Reduced	Improved Stability

What we found is that Armenian organizations that use certain tools, like CRM systems and sophisticated analytics platforms, tend to be much better in terms of management. This is because they make decisions on data that actually exists, making them more accurate and less uncertain. That means they can plan more proactively and strategically. With the use of data these organisations can make more informed choices and do not have to rely on guesswork or intuition. This keeps them ahead of the curve and helps them take advantage of new opportunities. In conclusion, it is evident that the right tools and data-driven decisions can make a huge difference in an organization's success. It seems that companies that have gone digital in Armenia have a slight advantage over traditional firms. They can react faster to change and make better informed decisions for example, which means they are less likely to face operational and strategic obstacles. The reason why is they're using data smartly, integrating data into all aspects of their processes. This makes them more agile and responsive – they can get ahead of the curve more easily. Digital Armenian organizations can use data in this way to make better and faster decisions that will help them avoid common pitfalls and stay on track. Certainly, companies which use digital technologies have a big edge on traditional companies. This is really important for businesses like banking, telecommunications and e-commerce. These companies need to be able to change and make decisions quickly. They also need to be efficient. With technologies, banking, telecommunications and e-commerce companies can react to changes fast make good decisions and make their operations better. This will help them do better. In today's, business world things are moving fast. So, it is very important for businesses like banking, telecommunications and e-commerce to use technologies to stay competitive and succeed.

These results show that:

$$\text{Efficiency} = f(\text{Data, Speed, Accuracy})$$

This means that for an organization efficiency depends on how good the data is, how fast they can process information and how good their decisions are. Efficiency for organizations is all about having good data processing information quickly and making accurate decisions, about banking, telecommunications and e-commerce.

Overall digital transformation helps Armenian organizations make decisions and reduces uncertainty, which makes their management systems more effective. However, the impact of transformation is not the same in all areas because some Armenian organizations are more digitally mature have more resources and are better, with technology, which affects how well they do.

Table 2 Digital Maturity in Armenian Organizations²

Level	Description	Armenian Context	Performance
Initial	Minimal Digitalization	SMEs	Low
Developing	Partial use of digital Tools	Medium-sized firms	Moderate
Integrated	System-level Integration	Banks, telecommunications	High
Advanced	AI-driven and automated systems	IT sector, tech startups	Very High

The Armenian market has a gap in digital maturity. Some organizations are ahead especially big companies in banking, telecommunications and IT. They use systems and automation which helps them a lot.

On the other hand, small and medium-sized businesses are still playing catch-up. They're using digital tools, but their systems are all over the place - fragmented and not really working together. This gap in maturity is holding back the economy as a whole and preventing businesses from making the productivity gain, they could be making.

The level of maturity directly affects the performance of a company. Digital maturity helps companies make better decisions, work more efficiently and stay competitive. Those that are not have processes, more uncertainty and less flexibility.

To achieve economic growth, in Armenia it's crucial to improve digital maturity across all levels especially among small and medium-sized businesses. This will help reduce disparities and boost the economy.

Table 3 KPI-Based Performance Evaluation³

KPI	Traditional Firms	Digital Firms	Change
Conversion Rate	2–3%	5–8%	+2x
Customer Acquisition Cost (CAC)	High	Reduced	Decrease
Customer Lifetime Value (CLV)	Medium	High	Increase
ROI	10–15%	20–30%	Significant Growth

\ The results show that digital marketing really helps businesses do better. Companies that use marketing get better at finding the right customers spend less money on getting new customers and make more money overall.

We took a closer look at companies in Armenia and what we found was pretty interesting. It seems that the ones using marketing tools are way better at getting their customers engaged, they make the most of their marketing budget, and they get a much better return on their investment. This shows that when companies use data to make decisions they do better. The companies make choices and get more from their marketing efforts by using data. It is about being strategic and using the tools to reach goals.

- Banks in Armenia use data to offer services to customers. This keeps customers satisfied and loyal.
- Online shopping platforms use tools to find the customers and improve their experience. This approach benefits customers. Helps businesses build strong relationships.

By using data and tools companies tailor services to meet customer needs. This makes customers feel valued. As the result customers are more likely to return. This leads to increased loyalty and retention. It is clear that companies are doing well with marketing. Digital marketing makes an impact. This is a sample of why digital marketing's important for companies in Armenia. Companies that want to compete and stay ahead need marketing. Digital marketing helps companies, in Armenia improve performance. It helps them achieve results in the long run.

Table 4. Comparative Analysis: Armenia vs. Developed Market

Indicator	Armenia	Developed Markets
Digital maturity	Medium	High
AI adoption	Low–Medium	High
Data utilization	Partial	Advanced
Automation level	Low	High

Armenia shows it can grow fast but it's still catching up to countries, with strong economies.

The main reasons it lags behind are:

- It doesn't have resources.
- Its technology and infrastructure need improvement.
- There aren't skilled workers.

The problems that impede the development of Armenia are the following:

Challenges in Digital Transformation

The study identifies several critical barriers:

- Limited financial resources
- Insufficient technological infrastructure
- Lack of digital competencies
- Organizational resistance to change
- Regulatory and institutional barriers

These challenges present a major obstacle to the adoption and success of digital transformation initiatives.

Practical Implications

To make management better Armenian organizations should do a thing.

1. They should make a plan to slowly introduce digital ways of working overtime.
2. Armenian organizations should use management systems that are based on performance indicators.
3. It is an idea for Armenian organizations to spend money on teaching their employees new digital skills and training their workforce.
4. Armenian organizations need to set up rules, for how they handle data.
5. Armenian organizations should also bring in intelligence and automation technologies to help them work smarter.

Conceptual Framework

Digital Transformation

- Data Collection
- Data Processing
- Speed and Accuracy
- KPI Systems
- Management Effectiveness
- Competitive Advantage

Scientific Contribution and Research Novelty

The Scientific Contribution and Research Novelty of this study is very important.

This study is about how digital marketing's linked to how well management systems work in Armenia.

The study comes up with a framework that looks at how digital marketing and management systems work together in a country that is still developing which is Armenia.

First the study says we need to look at how management systems work in many different ways.

This includes how good the data is, how fast it is processed and how good the decisions are that are made from it.

This study is different from others because it looks at marketing as part of a bigger system that includes technology, management and performance.

The study also develops a model specifically tailored for Armenia.

This model looks at how ready companies in Armenia for digital marketing.

It finds that big companies and small companies are not the same when it comes to marketing.

This helps us understand how digital marketing works in countries that are still developing where some companies have a lot of technology and others do not.

Third the study comes up with a system to measure how well digital marketing is working. It looks at things like how many people buy something how much it costs to get a customer how much money a customer will spend over time and how much money is made from digital marketing.

This shows that digital marketing can really help companies do better.

Fourth the study compares Armenia to countries that are more developed.

It finds that Armenia is behind in some areas like using intelligence and automation.

This helps us understand where Armenia is compared to countries when it comes to digital marketing.

Finally, the study helps us learn more about how digital marketing works in a country that is not often studied. This fills a gap in what we know about marketing, which mostly comes from studies of developed countries. The study finds that digital marketing is very important for how management systems work. Digital marketing makes decision making better makes companies work efficiently and makes them more competitive. How well digital marketing works depends on how ready a company is for it. In Armenia some companies are not ready for marketing because they do not have the same access to technology as others. To have economic growth and be competitive in the long-term companies in Armenia need to bridge the gap between those who have access, to technology and those who do not. They also need to come up with strategies that include everything they do. Bridging the divide is really important. It helps in achieving economic growth. We need a plan for strategies that play nice with everything else. So we can remain competitive for a little while. You cannot grow without bridging the digital divide. That's where integrated digital strategies come into play.

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