

# Communication in the 21<sup>st</sup> century. The influence of technology and globalization

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## Abstract

**Research background:** This paper highlights the evolution of the way we communicate, especially on how it accelerated to today's means of communication, resulted as a secondary outcome of the actual covid19 pandemic. We try to elaborate on the evolution of the technology, from the primitive email to today's Zoom meetings and others powerful tools of collaboration.

**Purpose of the article:** Globalization although it has decelerated as a 21<sup>st</sup> century standalone tool, it had its powers and paths saved and restored by the use of communication technology that not only stepped up as a key player in the global IT&C market, but also it is pushed to new limits by the involvement of companies like Google and Amazon in pushing virtual meetings at the next level. Our study follows the journey of becoming a global and connected citizen in the 21<sup>st</sup> century by analyzing the macroeconomic perspective and also by creating an oversight on how the business concepts in the communication technology market will influence the next decade.

**Methods:** The methods will consist of an analysis of the global environment of the IT&C companies and of the most tech-savvy economies.

**Findings & Value added:** The key feature of this research is that it offers an elaborate plan on the next decade will look like in the field of communication from the technological and globalization perspective.

**Keywords:** *globalization; technology; communication*

**JEL Classification:** *F01; F12; F15*

## 1 Introduction

The ability of public and private actors to rule can be connected to current patterns of governance in the international environment (Profiroiu et al., 2020). The work strategy is based on three dimensions: the problem's purpose and the organizational structure of the actors engaged, the problem's typology, and the institutional framework (Knill and Lehmkuhl, 2002).

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Governance can be viewed as a paradigm for putting theory into practice in everyday life (Burlacu et al., 2021). Five concepts, such as (Bodislav, 2013), can be extracted and presented as practical solutions for changing the game's trajectory:

- Governance is a complicated network of institutions and persons drawn to and away from government.
- The lack of boundaries and responsibility for addressing social and economic issues is recognized by governance.
- The power of dependency in the interaction between the institutions participating in collective action is identified by governance.
- Governance is a self-governing network of actors.
- Governance recognizes the government's ability to bring things to a close, while not limiting its ability to command and wield its powers. This concept can also be used as a model for utilizing new tools and procedures to attain the desired outcome (Stoker, 1998).

## **2 Methodology - Changes in state governance as a result of internationalization**

The link between the public and private sectors, as well as the power to influence the social, economic, and political processes involved in particular acts, generate four forms of governance (Bodislav, 2013). When the pressures of globalization, as well as political and economic power, are taken into account, the players' ability to be grounded in governmental reality emerges (Gawer and Cusumano, 2002). Internationalization can be defined as a three-dimensional governance structure based on interventionist regulation or legally mandated self-regulation, self-imposed regulation from a competitiveness standpoint, and market-created regulation. Another issue is the quantity of actors in the economy: public actors who are unable to directly affect the conduct of private actors, resulting in a direct correlation between the power of influence and the economic mechanism's fluency (Bodislav, 2012).

During this postdoctoral research, returning to the quantitative component and observing the technological, intangible substrates built is wanted, as is the development of effective governance in the network economy and the consequences developed among human psychology (Sarbu et al., 2021). Any economic system (whether micro - at the corporate level or macro - at the state level) forms groups (micro: joint ventures; macro: state unions), with these groups serving as the complex unit of work for the evolution toward economic advancement from the perspective of globalization (Radulescu et al., 2020). However, in order to start the engine of global cooperation and collaboration (Radulescu et al., 2020), a click of economic systems is required, particularly in the desirability of global cooperation and collaboration (Profiroiu et al., 2020). The decline of economic systems is possible if three conditions are met: knowledge as a source of evolution, not as a resource, making a unifying note with capital and labour, thus becoming a prevalent resource (economics becomes scientific), Economics as a practical and theoretical experience of wealth creation, but outside the control of political power (state politics or corporate politics), and Economics as a practical and theoretical experience of wealth creation, but outside the control of political power (state politics or corporate politics) (Bodislav et al., 2020).

Limitations of any sort can limit an economy's growth, but they can also be viewed as possible possibilities by decision-makers directly involved in the political execution of a state, a continental organization, or a global trade organization (Andrei et al., 2009). In his book "The Earth Is Flat," Thomas Friedman aimed to emphasize one of the effects of globalization: the levelling of the "playing field" on which global market rivals compete. Technological innovations developed in the private sector with state support (which can be

financial, legal, regulatory, flow, or purely moral) have revolutionized the workplace, bringing the power represented by emerging economies' competitiveness, where new players coexist with established players in developed countries (Santos and Eisenhardt, 2005). Surprisingly, while these advancements have resulted in an increase in cross-border trade, relational hurdles - barriers to human productivity - are on the rise as a result of the current economic climate (Negescu et al., 2020).

The existence of functional leadership inside transnational firms is inefficient from the human side of management's perspective since they must build hierarchical connections or networks with partners (either states or other enterprises) within other nations (Bran et al., 2020). The office of leaders (at least in the private sphere, the term leader shall have the meaning of a member of the executive level C-Level Suite, according to American law> for corporations; executive member of the government; executive member of the parliament of a country with executive function; member of any organization with a certain level of influence in the economy> and with an influence not affecting the economy> and with an influence not affecting the economy> and with an influence, however, these leaders confront derived limits (which have a residual character: historical foes, cultural differences, unfinished historical circumstances, and such limitations intensify conflict, impose performance restraints, and keep the flow of innovations below the potential level) (Teece, 2012, Burlacu et al., 2019).

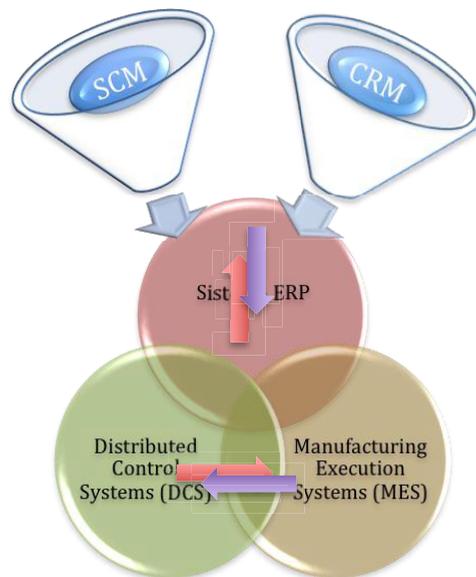
The intangible evolutionary component is also a point of rupture and acceleration into the future: the need to ride the crest of the wave of innovation in order to position humanity on the enlightened side of evolution, the part that reduces losses, and to follow the proposed plan at the country, region, and union levels (infrastructure, reclaiming comparative advantages, establishing competitiveness poles, and so forth).

### **3 Results - IT synergy innovation with one-of-a-kind solution in price targeting**

We can discuss the similarity of technologies found in production lines that can customize products considered limited series or even unique to wide series products in order to clearly observe how the synergy between Big Data and Business Intelligence should result in perfectly customizable solutions used in the development of a state or a community (solutions already being offered to corporations) in order to clearly observe how the synergy between Big Data and Business Intelligence should result in perfectly customizable solutions used in the development of a state or a community (solutions already Intelligent robots, artificial intelligence, and genetic algorithms are already being used in manufacturing lines today. In order to execute unique and personalized goods, production lines will be able to self-configure and transform in real time. The authors argue that production-oriented IT systems should utilize customer/buyer-oriented designs that allow people to develop and order bespoke goods and then acquire them at reasonable costs in order to transform technical discoveries in production into successful business (Burlacu and Jiroveanu, 2011). Increased processing power will be required for such architectures, which is not an issue now. The proposed software architecture for the manufacturing industry can be thought of as an extended ERP (Enterprise Resource Planning), with the work's original contribution being the integration of final buyers with the system's functionality through the ability to design customized products and place orders for not only purchase but also product execution (Avram and Bodislav, 2013). This presents the concept of expanded e-commerce, which refers to the use of technology and internet assistance not just at the level of a virtual store, but also at the level of a virtual factory (Burlacu and Jiroveanu, 2009). Because IT systems have ceased to be simply tactical and operational instruments in the business, integrating IT plans with the firm's development strategies is important. They're tactical tools that help to

support or even start new company concepts (Ionita et al., 2009). Since the 1960s, software designed for production-oriented sectors has piqued people's attention (Burlacu, 2009). Material Requirements Planning, or MRP, was established in the mid-1970s to plan the requirement for materials and raw materials in the manufacturing process. MRP's concept grew and evolved quickly, resulting in the development of complex and powerful systems for planning and controlling production resources at the same time. Manufacturing Resource Planning - MRP II is the idea that underpins today's ERP systems. The primary function of an MRP II is to manage raw material and material requirements in accordance with production requirements, but the system also integrates and functionalities with superior logic, such as financial accounting, inventory management, sales and distribution, human resources, and so on (Avram and Bodislav, 2013).

Following that, ERP systems were enhanced by connecting them with supplier management systems in order to improve the management of raw materials and commodities required for manufacturing. Supply Chain Management (SCM) systems are what these are. Customer management, CRM, or Client Relationship Management, systems have also been incorporated.



**Figure 1.** A production-oriented system's components.

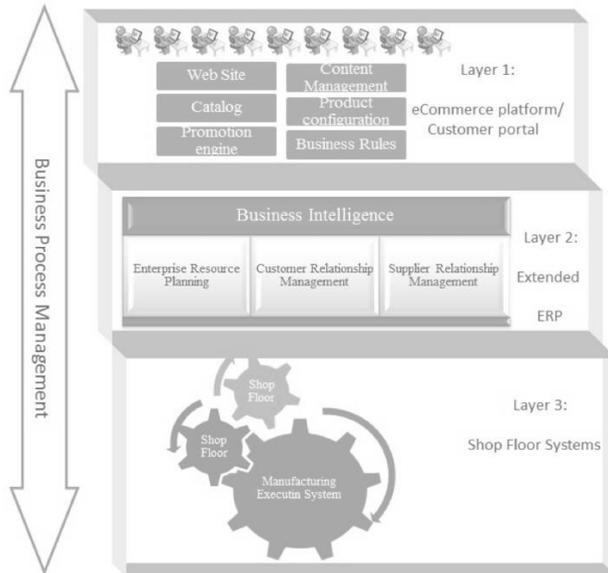
Source: Avram and Bodislav, 2013

Manufacturing Execution Systems (MES) automate and linearize the manufacturing process as a work unit. From the time an order is placed until the final product is delivered, the MES is in charge of streamlining (management and optimization) the manufacturing process (Xiaohui, et al., 2020). Manufacturing execution systems are utilized in industries such as automotive, aerospace, textiles, pharmaceuticals, medical equipment, and any other that involves procurement procedures in its development and implementation (Rochet and Tirole, 2003). The fundamental components of an expanded ERP system including supplier and customer management functions, as well as systems specific to manufacturing lines, are shown in Figure 1.

## **4 Results - The Mix between Technology, Globalization and Specialised Communication**

Companies like Pomarfin, for example, have a business model based on 100 percent customizable solutions that are also perfectly automated, resulting in the perfect shoes being created (even for those with certain defects or orthopaedic deficiencies) at prices that are comparable to manufactured products. in a wide range (this business strategy was selected to avoid outsourcing manufacturing to China and therefore laying off a portion of the company's management and production staff in Finland). If it is now feasible to get benefits from personalization of clothes and footwear items at a reasonable cost by using 3D scanners, the benefits can be considerably higher if computer systems are developed with this in mind. The study's unique component is the creation of a prototype software architecture at the macro level of the key components and communication between them in order to enable a company focused on the manufacture of personalized goods in the near future. Assuming that 3D scanning is practical and that the cost of a 3D scanner falls below a certain threshold in the near future, Pomarfin's business model will become much more efficient because it will no longer require shops and presentation stores with 3D scanners. Buyers will use their own devices to choose the ideal pattern and will submit their orders using the e-commerce application's interfaces (Avram and Bodislav, 2013). The real issue now is to come up with new IT systems that can support such a business strategy. Customers must be able to personalize their preferred product and place orders directly in the manufacturer's computer system, which necessitates real-time connectivity between all component information systems.

These needs, together with the growth of the Internet, have enabled the creation of designs geared toward efficiency and performance, capable of delivering messages between various components from anywhere on the planet over the Internet. An SOA, or Service Oriented Architecture, is the architecture presented in this paper. Web services represent the independent components that interact in the SOA architecture. The SOA architecture is made up of a variety of technologies and standards. To develop a platform based on the SOA architecture, it is important to analyse and pick the suitable software solutions. IT systems must become more adaptable and changeable in order to keep up with the current industry needs. The SOA architecture suited for the manufacturing business, where consumers may modify and order items, is depicted in the diagram below.



**Figure 2.** A production-oriented SOA architecture that is differentiated.

Source: Avram and Bodislav, 2013

The Proxy Server, which routes communications between the architecture's components, is the architecture's focal point. The autonomy of each component is a key benefit of this design. Each system in the architecture is self-contained and operates as a stand-alone application that can be deployed anywhere on the network and connects with other apps via web services. The architecture provided is open, meaning that new components can be added at any moment without requiring current components to be changed. The customer's involvement with the complete architecture provides the original aspect of the architecture in the sense that the entire production cycle begins with a customized demand to execute a unique product. The whole production cycle as it exists now in production-oriented computer systems has to be moulded by allowing the customer to not only configure but also create a product.

## 5 Discussion and Conclusion

Today, the achievement of reduced manufacturing costs is defined by automation and uniformity. A customer can choose any colour as long as it is black, according to Henry Ford, the founder of Ford Motor Company, but it is clear that there are already developments in decision automation involving (still) "steroidizing" the principles and mechanisms of work, only after we have to deal with the introduction into the equation of Business Intelligence practices that can evolve globally and with an automatable process (Avram and Bodislav, 2013). Starting with the analysis completed up to this point in the postdoctoral research and filtering through what was summarized in the first two chapters of this book, we arrive at the research's conclusion, in which we construct a hybrid indicator to support future research in the field, with its feasibility being validated by the financial results provided.

Automation is the next phase of communication and the first step toward automated governance because it is based on the following principles: reporting, analysis, integrated workflow, visualization, analytical metrics (scorecard), all of which are standard processes for performance management, advanced analytics (data mining and predictive analytics), and information management (data profiling, data quality testing, intelligent data storage and total

data integration). Automation is a new member of the social process that reduces the possibility of a state making a profit, works as a feature of minimizing profits to return to the community in order to improve their standard of living and life expectancy; the advantage provided by the framework or general indicator type solutions created based on the Business Intelligence and Big Data synergy functionality is to have a proactive management function of automatic (automated) decisions.

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