



## ENTERPRISE TRANSFORMATION IN THE DIGITAL ECONOMY

**Ergashov Israil Hasanovich**

Specialist of the Ministry of Finance of the Republic of Uzbekistan

Article history:	Abstract:
<b>Received:</b> 10 <sup>th</sup> October 2022 <b>Accepted:</b> 10 <sup>th</sup> November 2022 <b>Published:</b> 18 <sup>th</sup> December 2022	This work sets the vision for organizational transformation that will secure competitive advantage in the digital economy, as the border between society – market - organization becomes more permeated to facilitate new types of assemblages of „meshworks“ within and across organizational boundaries.
<b>Keywords :</b> eNetworked ecosystem, architecture of participation, power law, peer production, responsible autonomy, human capital, social capital, digital economy	

### INTRODUCTION

Fuelled by information technologies and communication networks (in short - ICT) the world is shifting from the industrial revolution to the 'networked society and economy' in which the (no longer effective) Fordist and Taylorist models are seamlessly being replaced by new design principles for organizations, new aims and new ways to achieve them. With this new human resource management systems are currently emerging to support how people can increase their capabilities through collaborative networks.

The explosion in size and complexity of ICT systems in all domains of society: production, healthcare, education, defence, business, energy & environment, etc has opened the door to entirely new forms of social organization. The eSociety is characterized by a high degree of decentralization stemming from myriads of artefacts and humans (the world of atoms), connected via computing hardware and software elements (the world of bits) in unprecedented techno-social systems.

### MATERIALS AND METHODS

While institutions are the rules of the game' that impose constraints on human interaction, organizations are the players' in the game [1]. The interaction between the rules and the players is what fosters institutional change out of the institutional framework conjoined with the other standard constraints of economics and the physical environment. Organizations on the other hand bring individuals with some common interest together into groups, whether economic organizations such as firms, unions, cooperatives, or political ones such as parties, agencies, governing bodies, or social ones such as religious bodies, clubs and associations. The accretion over time, by dominant economic and political actors, of beliefs into an elaborate structure of institutions (as sets of rules of the game) that determine economic and political performance creates a so-called

institutional matrix' [2] which determines what varieties and number of organizations can arise. The economies of scope, complementarities, and network externalities of an institutional matrix make institutional change overwhelmingly incremental and path dependent. However it is individual innovators that seek to induce institutional change through efforts to change the rules – directly through political and other influence means or indirectly by technological, economic or social means or by (either deliberate or purely accidental) efforts to change the effectiveness of enforcement.

### RESULTS AND DISCUSSION

The interesting experience of Amazon.com in developing an eNetworked business model for book sales was that once the network was built, transaction/coordination costs decreased significantly and as the network grew they totally collapsed. Amazon discovered that they were able to make as much or more money in the long tail (in aggregate) than they were making in the head of the curve (as [1] says in the title of his book - The Future of Business is Selling More of Less). The ease of linking sellers of unique products (a book only one person would be interested in buying) with customers interested in those products was essentially an unanticipated costless additional capability that eNetworks enabled. Although sellers cannot generally make a living by selling from the long tail (unless they significantly increase product price) - the long tail does create or enables a larger, richer and more diverse market to arise where none had existed before.

This new eNetworked market model' provides a very low barrier to entry and a competitive/collaborative arena offering the possibility to move up toward the head of the curve and achieving mass market. It mirrors a model (Fig. 1) for specialized divisions of labour with a completely new incentive structure that is not tied by geographical or the traditional transaction cost constraints.

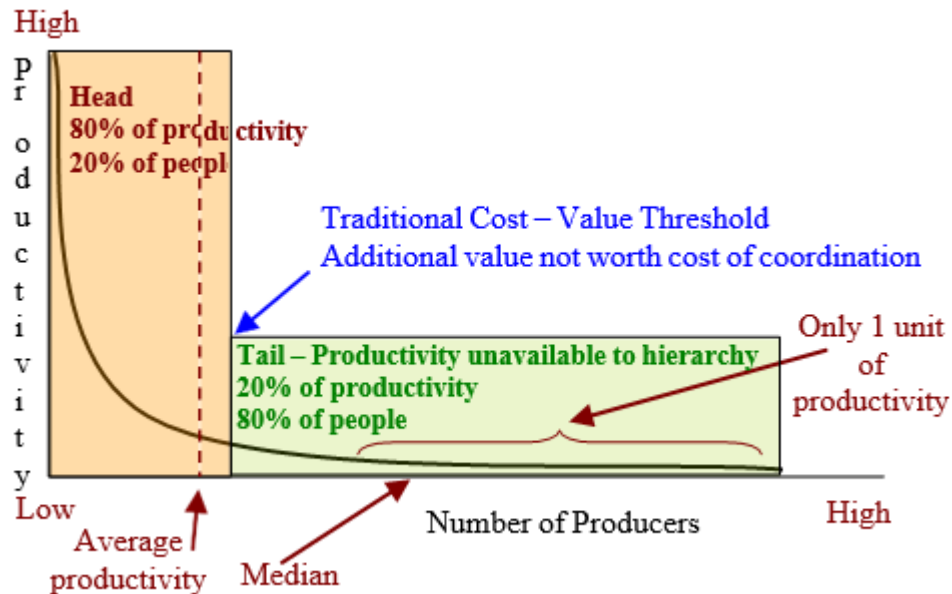


Fig. 1. The Long Tail of Coordination and Transaction Costs

To illustrate the market-labour parallel consider the two classical examples: Linux versus Microsoft Windows (MW) and Encyclopaedia Britannica (EB) versus Wikipedia. If we assume that productivity follows the same type of 20-80 rule than we can imagine people interested in developing an encyclopaedia or an operating system will follow the same rule. In Fig. 1 the left box represents the traditional organization such as EB or MW - they will hire the most productive people within the constraints of the cost-value threshold (perhaps in this case more like 1 to 5% of the most talented people available). The right box illustrates how Linux and Wikipedia are leveraging network technologies and architectures of participation to capitalize on the whole curve of potential productivity by reaping the aggregated value of the many people who only make one contribution, in addition to the traditional model (left box). We refer to this

'aggregate value of the many' as 'peer production'. It is in the right box (aka 'long tail') where organizations are able to harvest the immense productive capacity stemming from the intrinsic motivation of the many (peer production).

In order to fully leverage the power of networks and fully use the human capital we will have to enable a type of personnel platform where each individual's passions, interests, talents, expertise are made available to the whole organization and where the individual can choose to contribute their his abilities in a way that enables much longer continuity

of effort than is now possible within the framework of filling jobs'. We name this organizational platform architecture of participation because and define it as the design of system structures to optimize user participation and contribution, by minimizing any barriers to entry [1]. Our choice of the term is aligned with the ideas articulated in Mitch Kapor's maxim, "architecture is politics" [2] which point to the need to pay attention to the architecture of systems if we want to understand their effects. Network technologies and architectures of participation enable the capacity to connect the right people to the right situation at the right time in conjunction with universal access to information.

### CONCLUSION

As organizations learn how to operationally integrate the demands, opportunities, challenges and capabilities of network technologies and architectures of participation - the traditional cultures, concepts and paradigms will seamlessly transform. These emerging architectures will of course not completely displace the traditional hierarchies - rather they offer a fundamentally new platform for the coordination of human capability. Just as the industrial age created new ways of managing people and designing the work process, network technologies are creating a 'digital environment' which fosters new ways to harness human effort and calls for an economic philosophy of the virtual and digitally intangible based on peer-production as a synergetic 'force multiplier'. The



concepts of peer-production and responsible autonomy that we have briefly outlined will play a key role in this new mode of production rooted in architectures of participation as platforms of near costless coordination which maximize organizational capability.

The value proposition of the digital and networked economy stems from the need to maximize the return on society's tremendous investment in human capital. The 21st century economy will be one that is fundamentally based on unleashing human capital as the most powerful argument pleading for organizational transformation. Network technologies and architectures of participation that are laying the foundation for the eNetworked industrial ecosystem [3] open the possibility for a radical transformation of production. However cultural change can be difficult due to the natural resistance to radical attempts to transform. Institutions spawn organizations which depend on the perpetuation of the originating institutional frameworks for their continued survival [4] - and will therefore expend considerable effort and resources preventing change which the organizations perceive as threatening.

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