

Chapter 17

An Essay on Moligopoly Model: A Passage to the New Frontier of Digital Economy

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ABSTRACT

This chapter has attempted to provide a strong structural foundation of the newly emerged economic model of moligopoly in the era of growing digitization. The explosive nature of digitization since the beginning of the first decade of 21st century has posed some major problems for the existing textbook economic models since they have failed to explain the market forms within which the “Big Tech” firms are operating. Going by the standard norms of non-collusive oligopoly models, these technological behemoths do not form reaction functions – although they display all the natural ‘traits’ of a monopolist. Thus, the new economic model of moligopoly may be defined as a hybridization of monopoly and oligopoly models, respectively. In this chapter, four major “Tech giants”; namely, Netflix, Microsoft, Facebook, and Google, are taken as sample firms for time series analysis to lay the foundation stone of moligopoly model and its related postulates.

INTRODUCTION

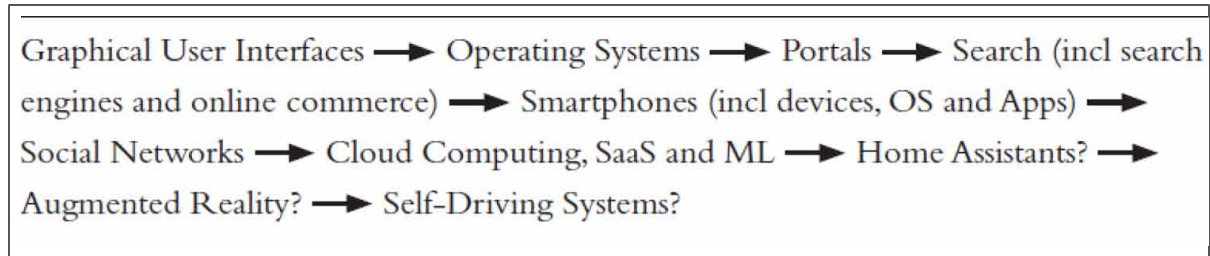
The idea of moligopoly evolved from the findings related to the big technological firms’ business models that not only violated the traditional profit – maximization condition of the firms resulting in the derivation of *equilibrium* price and output; but simultaneously able to maintain a sustainable difference between the Marginal Revenue (MR) and Marginal Cost (MC) schedules. Hence, technically, the moligopoly model is a clear departure from the existing textbook economic models. Out of many reasons, initially *three* major reasons could be highlighted for this aberrant functioning of the major firm in digital industry, and they are: *Discontinuity*, *Modularity*, and *Uncertainty* (Petit, 2020; pp. 64 – 171).

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An Essay on Moligopoly Model

To quote Petit (2020, p. 121): “The tech giants operate in an environment characterized by *discontinuity*. By this, we mean changes, events, or shifts which alter the competitive environment by reallocating strategic advantages and disadvantages among firms”. The sequence of historical discontinuity in digital technology may be illustrated in Table 1.

Table 1. Sequence of historical discontinuities in digital technology (Source: Petit, 2020; p. 123)



The concept of modularity may be defined as the economic process / processes that helps / help to combine (recombine) new products or services to the existing market at little cost (Dong et al., 2017). It is characterized by pervasiveness in the market accompanied by fierce competition to usher in random arrivals of new products and services.

According to Nambisan et al. (2017): “Most digital designs remain somewhat incomplete or in a state of flux”, and as a result, “there is an unprecedented level of unpredictability and dynamism with regard to assumed structural or organizational boundaries of a digital innovation, be it a product, platform or service”. Finally, the *uncertainty* factor of the digital economy is rooted in the fact that the firms are uncertain about the behaviors of their competitors. According to Petit (2020, p. 123): “Many big tech firms did not correctly anticipate the trends of the next generation of digital information technology. In the early 21st century, Microsoft adopted an approach to the Internet focused on control of content and networks, not search engines. Until 2004, Netflix had reservations about the potential of streaming over DVD. In 2012, Facebook expressed reservations about mobile ads monetization, arguably given screen and user attention constraints”. Moreover, in case of the *entry* factor, the big technological firms are quite apprehensive about the level of competition and entry of smaller but efficient firms in the market. As per the 10 – K, US SEC Report (1996); Microsoft declared that the “extremely rapid pace of technological change constantly creates new opportunities for existing competitors and start- ups and can quickly render existing technologies less valuable”¹, and according to the 10 – K, US SEC Report (2009); Google stated that “Emerging start- ups may be able to innovate and provide products and services faster than we can”². Now as per the standard textbook definition of monopoly, a monopolistic market is characterized by the features of a *single* seller who enjoys the power of price discrimination, lack of close *substitutes*, and a high barrier to entry (Bilas, 1979). In case of digital economy, it is *not* a single seller, rather a *motley* of sellers operating in distinguished domains of ICT sector control the market, and they *do* enjoy the power of price discrimination to attract an extremely large pool of consumers. Apart from few exceptions like Amazon®, Alibaba®, Netflix®, and Amazon Prime®; big tech firms usually do not sell close substitutes. In those cases, the firms in question follow the oligopoly model, and tend to offer their *own* products / services within a specific price – band withstanding the concept of *reaction*

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