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IS OPTIMIZING OR NON-OPTIMIZING OBJECTIVE OF A FIRM IN THE GIG ECONOMY? A CHRONOLOGICAL APPROACH

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Abstract

In the gig economy, workers are managed by algorithmic management, where algorithms are being used to allocate, optimize, and evaluate workers. Due to this shift in the pattern, it is getting important to extract the objective of firms in the gig economy. The contribution of this study is twofold: first, the chronological review of previous studies conducted with the objective of a firm in economics. Second, the chronological review gives the direction to determine the objective of the firms in the gig economy. For, this purpose, the underline model presents in this study, which states that the objective of firms in the gig economy is to achieve an aspiration level for firms; on the contrary, traditional profit maximization and other optimization objectives. However, in the gig economy to achieve an aspiration level, firms set different goals that can be achieved with the coalition of firms with different specified economic players.

Keywords: optimizing, firms, Gig

JEL Codes: D21, C61

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I. INTRODUCTION

While studying the economic behavior of a firm, it is a crucial question need to be addressed that what will be the objective of the firm? The objective of a firm helps in defining the domain of the firm. In the traditional economics literature, the objective of a firm is to maximize profit. However, the profit-maximizing objective changed with the innovation of industry and complexity of corporate sectors and the introduction of new markets. Currently, the innovation in information technology opens doors to new business ideas and new products. The dynamic nature of technology and innovation bring forth the gig economy. The gig economy is a new way of work, which is reimbursed on a pay-as-you-go rate, meaning workers are only paid for the actual working hours (De Stefano, 2016). In recent years, several industries have experienced a rise in algorithmic management, where algorithms are being used to allocate, optimize, and evaluate workers. Despite the utilization of algorithms as a data management tool in traditional industries such as engineering, logistics, and delivery, algorithmic management are seen as one of the core innovations that enabled digital labor platforms like Uber, Amazon MTurk, Up Work or Takeaway.com (Lee et al., 2015). These platforms are all part of the rising gig economy, which refers to a work environment with limited projects (gigs), rather than full-time employment (Jarrahi et al., 2019; Wood et al., 2019).

Worldwide, around 70 million workers are supposed to be part of the gig economy and have registered with an online labor platform (Heeks, 2017). It is even estimated, that the number will grow further at an annual rate of 26 percent (Ali, 2015; Ali and Rehman, 2015; Kässi & Lehdonvirta, 2018). The gig economy can loosely be described as "platform", "sharing" or "on-demand" economy (De Stefano, 2016). Most commonly, platform workers are individual, self-employed contractors (Duggan et al., 2020), which results in apparent autonomy and higher perceived flexibility (Rosenblat & Stark, 2016) while at the same time working under the constraints of an algorithm. For those workers, proactively shaping the job, according to their needs and abilities may be increasingly important. The existing literature distinguishes four main types of digital platforms in the gig economy: food delivery, lodging marketplace, ride-sharing and freelancing (Jarrahi et al., 2019; Kaine & Josserand, 2019). However, one sector has gained momentum in recent years and is undergoing a rapid change: food delivery (Hirschberg, 2016). By 2025, online food delivery is expected to reach a global supersize with a revenue of 200 billion US dollars (Singh, 2019). This study will develop the objective of a firm working under the characteristics of the gig economy. For this purpose, a chronological approach used, in which economic ideas are discussed in order of time. It follows that the economic ideas of different economists can be presented year wise. The contribution of this study is twofold: first, the chronological review of previous studies conducted with the objective of a firm in economics. Second, the chronological review gives the direction to determine the objective of the firms in the gig economy. For, this purpose, the underline model presents in this study, which states that the objective of firms in the gig economy is to achieve an aspiration level for firms; on the contrary, traditional profit maximization and other optimization objectives.

II. CHRONOLOGICAL REVIEW

In the existing literature, the economic thoughts on the objective of firms ideologically categories as profit-maximizing theories, optimizing theories (other than profit) and non-optimizing theories. Moreover, optimizing theory deals with managerial theories and non-optimizing theory deals with behavioral theories. However, the economists have been interested in the objectives of firms, and individuals who control firms, for centuries. In this regard, Cournot (1838) in his pioneer work developed the maximization using the concept of marginal. Following the concept of marginal, Marshall (1879) in his book on the economics of the industry, describe the objective of a firm is profit maximization. While using marginal cost and value analysis Marshall (1890) find the profit-maximizing level of output. Later on, Chamberlain (1933) invents the theory of monopolistic competition by considering the role of product differentiation, control over prices, and the role of advertising. But the objective of the firm was still profiting maximization by using the marginal analysis. However, sales depend upon the skills with which the good is distinguished from others and made to appeal to a particular group of buyers. Likewise, Robinson (1933) also, write a book on imperfect competition that dealt with all three markets except pure competition. But the central objective of the firms remained profit maximization. The central focus of all these theories is profit maximization. The firms act as "black boxes" and are influenced by simple supply-side variables (MC) and simple demand-side variables (MR). While Coase (1937) adds some extent in the nature of the firm by incorporating transaction cost. The transaction cost refers to the cost of providing for some goods or services through the market rather than having it provided from within the firm. While the objective of the firm still remains static on profit maximization.

Contrary to the theories of profit maximization, the theory of Berle and Means (1934) is a pioneer in the development of non-profit maximizing theories. They develop the idea of separation of ownership from control. It follows that the development of corporate sectors makes it possible to control the firm under the manager rather than the owners (shareholders). However, profit maximization is an object of the owner but not for the manager of the firm. This critique paves the ways in the development of non-profit maximization theories. In this context, Baumol (1959) developed the "Revenue Maximization Hypothesis" in which sales maximization was the objective of the firms. It implies that firms attempted to maximize sales because it may lead to greater market share and profits in the long run. Moreover, the pay of executives is often linked more closely with sales than to profits. Contrary to the sales maximization theory, the theory of Williamson (1964) states that manger only interested in sales maximization if the benefit that he/she gains from increased sales (power, salary, and prestige). He argues that the most important motives of businessmen are desires for salary, security, dominance, and professional excellence. All these yields additional utilities or satisfaction of the manager. These can be gained by incurring additional expenditure on staff, managerial emoluments, and discretionary investment. Williamson argues that managers have discretion in pursuing policies that maximize their own utility rather than seeking the maximization of profits, which maximize the utility of most shareholders (i.e., The owners of the company). Meanwhile, the theory developed by Marris (1964) states that there is a trade-off between the manager's utility maximization and growth of sales, which in turn lower the dividend, and the manager may lose his job. However, there is a need to develop the manager cum owner (shareholder) utility maximization approach. Because managers have a utility function in which salary, prestige, status, power, security. On the contrary, the owners (shareholders) are usually more concerned with profits, market share, and output. They have a common interest in the size of the firm (which includes fixed assets, plus inventory, plus net short- term assets, including cash revenue). Finally, the objective of the firm still maximization of utility of manager with growth in firm size.

Under the behavioral theories of firms, the Simon (1963) inferred that business people can never be confident whether they are maximizing profits or not. Instead, business people "satisfies" rather than maximize, i.e., Their aim is to earn just satisfactory profits. He stated that firms have an 'aspiration level' which they seek to reach. In fact, what the satisfactory aspiration level of profits will depend on past experience and will take account of future uncertainties, too. The aspiration level may be in terms of sales, market share, profits, etc. After a time lag firm compares the actual performance and aspiration level and sets future policies. Similarly, Cyert and March (1963) developed similar models based on the interaction of individual managers within an organization. The outcome of these models was that firms would aim for a satisfactory level of profits and pursue other objectives at the same time. They have recognized that management must achieve an objective, or possibly a set of objectives, through the efforts of a group of persons or through a coalition. They postulate five major goals a firm set like production, inventory, sales, market share, and profit maximization goal which can be achieved with the different coalition.

III. THE MODEL

In this section, the model to understand the objective of firms in the gig economy is developed. Mostly in the gig economy, to some extent, the behavioral theories to study the objective and the behavior of firms is most relevant. In the gig economy initially firm set goals to introduce the nature of the product. For this purpose, the advertisement might play a vital role. In its initial phase firm seems to be set an aspiration level and forced the organizing coalition to achieve it. The coalition consists of the various units or parties associated with the firm such as managers, workers, shareholders, suppliers as also professional people like accountants, auditors, lawyers, etc. However, the behavioral theories have two major pillars: one is related to goals and the second is related to the coalition. For better depiction of the gig economy model, let assume that firm under the digital platform is providing only delivery services. In this study, the four types of the coalition are considering which the following are: customer, supplier, gig worker, and organizational coalition. The effort of these coalitions may help in achieving the goals of the firm. The goals of the firms in this type of firm are depicted in figure 1. The underlying goals of the firms are customer satisfaction, profit, product range, sale, and market share. The description of the goals is as follows: first, customer satisfaction is mandatory to increase the sale because the satisfaction of customers can create a multiplier effect. Second, the purpose of setting profit is for the payment of dividends to shareholders. Third, the product range increases the number of products producing by suppliers in response to taste diversification of customers to capture the new customers. Fourth, this (sales) goal may be specified in the future either in volume or in value terms. Moreover, it may again be expressed in terms of a level and/or range. Fifth, this goal may be specified for future perspectives for more area coverage within a geographical location.

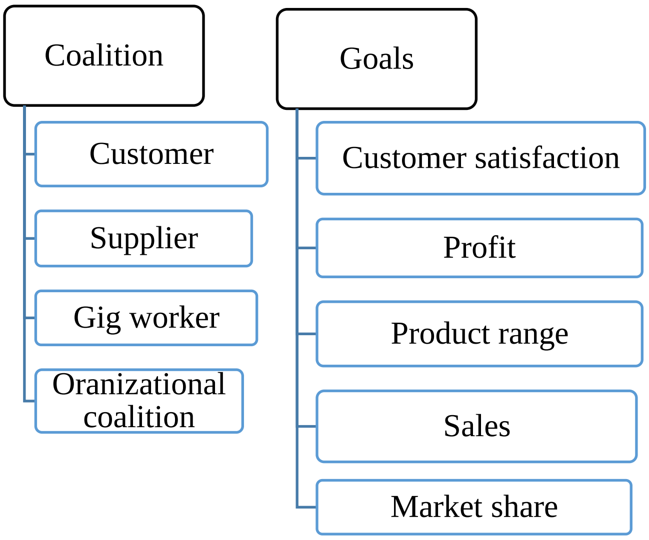

Figure 1: Coalition and goals of firm

For the firms in gig economy, the role of coalitions is more important in achieving the goals of the firm. For instance, the goals to achieve a specific level of sale and profit is directly linked with the customer because if the customer gives better feedback and rating in favor of services provided by the firm it may create a “bandwagon effect”. The bandwagon effect, may increase the demand of a product for a person when he/she come to know other people used this product and share favorable feedback. Hence, a strong coalition with customers may increase the sale and profit of the firm and create a chain of customers to spill over the bandwagon effect.

Likewise, the strong coalition with the supplier may result in customer satisfaction due to quality products. It is stated that the quality of a product is positively associated with customer satisfaction (Jahanshahi et al., 2011). Moreover, customer satisfaction also increases the profit through a multiplier effect of rising the customer with a favorable rating. Similarly, a strong coalition with the supplier may also result in a product range which also helps in expanding the market share. While strong ties with gig workers may also result in customer satisfaction which is a major goal of a firm in the gig economy. Moreover, the strong organizing, coalition inside the firm may result in the expansion of market share and area coverage. It follows that expansion in area coverage may a potential source of increasing the market share by providing the services in a region where it was previously unavailable. This can be only possible strong organizational coalition.

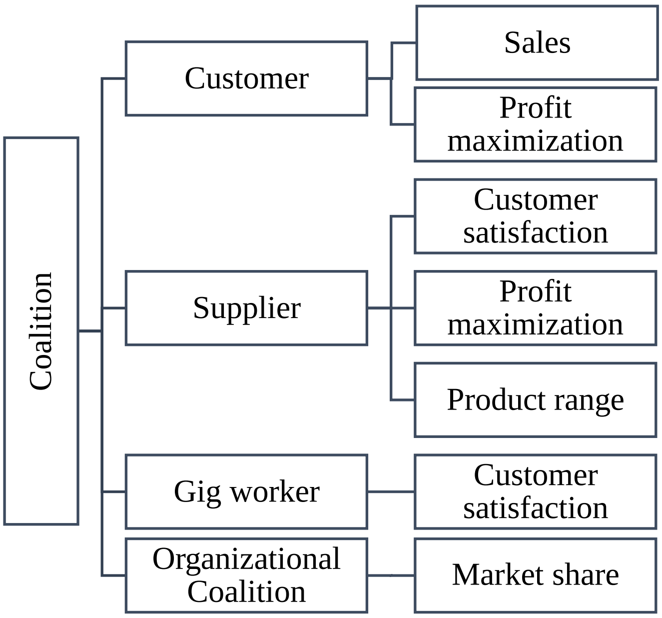

Figure 2: Goals achieved with coalition

IV. CONCLUSIONS

In this study, the chronological review of literature has been done for the sake of determining the objective of a firm in the gig economy. The evidence found from changing the firm's objective from profit-maximizing to managers' self-interest maximization to non-profit maximization. However, in the gig economy, the object is to achieve an aspiration level in the presence of some defined goals. The goals may be present or future-oriented. The goals relate to customer satisfaction, sales, profit, product range, and market share. However, to achieve the specific goal a strong coalition is required between the firm and some other specified economic players. The coalitions between customers, suppliers, gig workers, and organization's employees are helpful in achieving the goals.

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