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Microfoundations of Organizational Growth: Consequences for Entry Strategies and Financing of New Ventures

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Abstract. *An enormous number of firms fail to deliver economically profitable growth in output even though they may have strong managerial teams and adequate capital. In this paper, we provide new empirical evidence to demonstrate a few fundamental factors that can account for the ability of a firm to achieve economically sustainable scaling. In a bid to achieve that, we surveyed and discussed the prevailing theories that have established various grounds for organizational growth. On the basis of these theories, we hypothesized about the likely microfoundations for organizational growth. We went further to test these hypotheses using empirical data for all publicly-listed Nordic firms over a lengthy span of time, specifically ranging from 1990 to 2020. To implement the test, we established an econometric model, which is predicated on variables that we argued are capable of serving as a proxy for the microfoundations identified. It is our submission that effective and sustainable attainment of growth in output requires a new entrant to develop strategies that are centered on innovative products, as well as target highly concentrated industries, which are characterized by large markets, while financing such economic activities using equity capital as against debt capital.*

Keywords: Entry Strategy, New Venture Financing, Microfoundations, Organizational Growth

JEL Codes: M1 & M13

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1. Introduction

In 2003, Daniel Dreymann founded the antispam service company, Goodmail, and managed to raise \$45 million in venture capital funding (Crunchbase Inc,2022). Nevertheless, the business did not see the light of the day. The management team at Goodmail were probably confronted with insurmountable challenges in the sustainable and profitable deployment of the invested capital in achieving growth. Goodmail is not alone in this catastrophe. Entrepreneurship literatures are inundated with instances of entrepreneurs who achieved minimal or little growth within their organizations (Gimeno, Folta, Cooper and Woo, 1997 as well as Wiklund, Davidsson and Delmar, 2003). Although most entrepreneurs wish to accomplish success in their businesses, a substantial fraction of new ventures, regrettably, culminate in fiasco (Knott & Posen, 2005; Peng, Yamakawa, & Lee, 2010). Crunchbase Inc. (2022) reported or ranked the top 10,000 companies and startups within the California area that have terminated operations. These companies were financed with a total of USD 102.4 Billion in aggregate and in a total of 12,522 funding rounds. In essence each firm was funded with an average of USD 10.24 Million (Crunchbase Inc., 2022). We would conjecture that these firms did not lack a credible and viable management team because Venture capital firms carefully screen and perform due diligence on businesses and founding members prior to investing their capital. Needless to say, that the new ventures ranked by Crunchbase on the average was adequately funded for their level of operational scale and the management team of the start-ups that received these investments were likely to be nothing short of excellence.

Challenges with growth and scaling are not limited to new ventures. It also abounds within the circles of long-established companies that are associated with well recognized brand names. J.C. Penney, a retailer of apparel and related merchandise in the United States of America, has struggled to maintain stable revenue let alone achieve any growth in its sales for the most part of the last decade. Its total net sales had collapsed from \$12.985 Billion in 2012 to \$10.716 Billion in 2019 (Statista Inc,2022). On the contrary Walmart Stores Inc, a retailer of general merchandise also in the United States, has seen its revenue increase from \$408.085 Billion for the financial year concluding in April 2010 to \$576.013 Billion for the annual financial period ending in April 2022 (Macrotrends, 2022). So, it could have been possible for J.C. Penny to accomplish growth because there is growth in its industry and among its competitors but for lack of the required microfoundations of organizational growth it has failed to do so.

1.1. Problem Statement

Several authors have advocated for firm capabilities such as huge capital, good management team and talented employees as the foundation for achieving organizational growth. For instance, the Iris Group (2019) recommended the need to ensure access to venture funding and talent development in facilitating the scaling of new ventures in the Nordic region. This recommendation is by no means false. However, we submit that, in addition to robust firm capabilities such as capital and managerial talent, there are underlying economic, behavioral and technical characteristics of firms and industries that must be present for a firm to be able to achieve consistent growth. These characteristics are what is denoted as microfoundations in this study. More explicitly, microfoundations can also be delineated as ideas, which level of analysis, mechanisms and social units are applicable for specifying a theoretical explanation



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(Greve,2013), including economic structures and strategic behaviors of firms that are fundamental for scaling as well as organizational expansion.

1.2. Research hypotheses

This paper attempts to unravel the mystery that might be associated with the following research question:

- What are the microfoundations of organizational growth and what implications do they have for an entrepreneurial firm's formulation of an entry strategy and a venture capitalist's decision to finance a new venture?

1.3 Research objectives

The core objective of this paper is to explore theories that have majorly accounted for the underlying economic, behavioral and technical features of firms and industries that constitutes or establishes the solid foundations for organizational growth and test these prevailing theories and the associated hypotheses using firm and industry data of approximately nine thousand firm-year observations for publicly listed Nordic companies between the periods, 1990 and 2020.

1.4 Structure of the paper

The rest of this paper would be organized as follows. In the subsequent section, theories of organizational growth will be discussed and elaborated, and some hypotheses based on those theories will be proposed. That is followed by the research approach and description of the data, provision of explanations for the data sources and clarification of the variables that are employed in the econometric regression of this study. The section after that presents and interprets the research outcome of this study. The ensuing section discusses the implications of the findings of this study, and that is followed by the conclusion of the study.

2. Theoretical Foundation

In this section, this paper would exhaustively discuss all pertinent and important theories that accounts for those characteristics, tendencies and capabilities that must be inherent in any firm that would be in a position to sustainably accomplish growth in its economic activities. These theories hover around organizational agility, organizational learning, strategic and positional momentum in a number of important firm activities, industry concentration and positive network activities.

2.1 Organizational Agility

Organizational agility is at the root of a firm's capacity for sustaining its competitive advantage and growth capacity. Elali (2021) posited that in a competitive market, that is associated with severe unrest and incessant surprises, strategic agility furnishes a feasible avenue to harness disconnected technological innovations in order to exploit a potentially associated disruption in consumer preferences and unstable



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supply chains, enabling the firm to prosper in an unbalanced and ambiguous environment. Saha, Saha, Gregar, and Saha (2020) stipulated that organizational agility enhances a firm's ability to react quickly and amenably by way of organizational creativity and technical surveillance in order to adapt to a rapidly transformative environment. Shahrabi (2012) posited that in a constantly changing environment organizational agility enables the firm to embrace opportunities and threats in the environment, potentially resulting in growth, improved adaptation and active change management. Joiner (2019) highlighted that by focusing on improving its strategic agility, operational agility and leadership agility, a firm that seeks to be competitive can be able to make a difference in a rapidly changing and complex business environment.

While the above studies establish the fact that organizational agility is a key means of achieving growth within firms, other researchers have elaborated on the approaches by which prime mechanisms of growth can support the development of organizational agility, somehow resulting in a feedback loop. Brueller, Carmeli, and Drori (2014) posited that the different forms of mergers and acquisitions such as platform and bolt-on acquisitions are capable of augmenting strategic agility in different ways as well as along distinct time skylines and that under appropriate management, acquisitions are able to facilitate the steady accretion of the competencies that are fundamental to strategic agility.

2.2 Organizational Learning

Organizational learning is a bedrock for an organization's growth. García-Morales, Llorens-Montes, and Verdú-Jover (2006) demonstrated that organizational learning and product innovation possess a favorable impact on the performance of a firm. Locke and Jain (1995) highlighted that organizational learning contributes to programs of constant improvement. Altinay et al. (2016) observed that there exists a favorable connection amid organizational-learning ability and entrepreneurial inclination and additively an advantageous relationship between entrepreneurial direction and growth in a firm's market share. Azizi (2017) demonstrated that organizational learning possesses the capacity to positively influence the firm performance of Insurance companies in Tehran. McKee (1992) examined product innovation from the lens of an organizational-learning tool or process and demonstrated that distinct categories of organizational learning competencies are connected with piecemeal innovation, intermittent innovation and incorporation of innovation inside the firm.

Organizational learning can reinforce organizational agility and vice versa. For instance, there was a profound paucity of organizational agility at Nokia, evolving from the quality of managerial choices, defective organizational design, escalating bureaucracy and deep-seated internal rivalries that probably brought about a low level of organizational learning that precluded the firm from diagnosing the transformation from product-founded rivalry to platform-grounded competition in the mobile-phone business ecosystem, which eventually culminated in the collapse of Nokia's dominance in mobile phones (Doz, 2017).

2.3 Strategic Momentum in Product Innovation and in Mergers and Acquisition

From the theories stated above, one could observe that organizational learning and organizational agility are mutually self-reinforcing and can individually contribute to product innovation within a firm. However, a singular event of product innovation is not sufficient to maintain organizational growth. A number of scholars have attested to the fact that substantial benefits can accrue when organizations



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sustain an inertia in repetitively innovative activities (Kelly and Amburgey, 1991). These gains basically arise from the opportunity of amassing knowledge from previous novelties and utilizing the capability to support the organization in reducing the marginal cost of implementing actions that are connected with innovation (Kelly and Amburgey, 1991 as well as Miller and Friesen, 1982). Researchers have also demonstrated that acquiring experience with a specific form of novelty encourages firm's members to perceive such innovation as an antidote to a broader array of challenges (Amburgey and Miner, 1992 as well as Prahalad and Bettis, 1986). Product innovation economies can be enhanced not only by inertia in repeated innovation (Kelly and Amburgey, 1991), but can also be greatly reinforced by temporal consistency of top managerial teams (Boeker, 2017).

Repetitive momentum in product innovation is somehow consistent with the postulations of the dynamic capabilities' model, which investigates the bases and approaches to wealth formation and capture within the ranks of private organizations that function in the interior of volatile environments that are associated with swift technological transformation. This framework, which was originally suggested by Teece, Pisano, and Shuen (1997), postulates that recognizing opportunities that are novel and developing efficient and effective organizations to exploit them are largely more central to the formation of private wealth than is the development of business strategies, if by strategy development one denotes implementing business practices that destabilizes rivals, elevates competitor's costs, and deters new entry.

As a result, a repetitive or continuous product innovation characteristic of a firm should strengthen the firm's product differentiation strategy, which is an organizational capability that has been observed to possess the capacity for positively impacting on impact on the firm's performance and growth (Ju, Tong, Hu & Sun, 2017). This is further buttressed by Gartner (2016), who demonstrated that continuity in product innovation generates a repeated demand for a product. Product innovation possesses an inclination to demonstrate analogous effects on organizational growth as does mergers and acquisitions. As previously mentioned, Brueller, Carmeli, and Drori (2014) posited that the different forms of mergers and acquisitions enhances organizational agility, which also possess favorable effects on organizational scaling. In previous several years, firms have frequently undertaken mergers and acquisitions as a strategic device for the creation and sustenance of competitive advantage (Haeruddin, 2017). It has also been observed that firms, which successfully achieve growth through mergers and acquisitions have a proclivity for exhibiting repetitive and contextual momentum in mergers and acquisition. Amburgey & Miner (1992) demonstrated that the undertaking of mergers has a tendency to accelerate the frequency of mergers of the equivalent category (repetitive momentum), and also that the decentralization of an organization generates a surge in the proportion of mergers of the diversifying type (contextual momentum). They also established that a firm's inclination towards diversification in its product market was established to upsurge the likelihood of product extension mergers but excluding conglomerate mergers, solely moderately corroborating positional momentum. Therefore, this study argues that the organizational ability to maintain inertia in repeatedly innovative activities and in mergers and acquisition can be central to organizational growth given that it supports a firm's capability to maintain a product differentiation strategy, which is a bedrock for organizational growth, consistently and efficiently.

2.4 Strategic Momentum in Financing Commercialization of Product Innovations and Mergers and Acquisition.



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Capabilities in scaling can emanate from a firm's capacity for consistently implementing successful mergers and acquisitions in addition to product innovations, enabling the firm to create critical resources or strategic assets. Investing in developing critical resources that are not easily substituted or imitated are the *sin-qua-non* for the sustenance of competitive advantage (Dierickx and Cool, 1989), in addition to being fundamental to delivering superior organizational performance in terms of growth and profitability (Majeed, 2011). This crucial organizational capability in effectively and efficiently developing critical resources mandates that a competitive firm must have access to financing. Carbonara and Caiazza (2009) observed that at the microeconomic level, an outpouring of capital flows to communal investment institutions such as private equity funds and investment banks resulted in tremendous investments in global mergers and acquisitions by these financial institutions. As already mentioned, developing critical resources over time by implementing mergers and acquisitions or product innovations require access to capital. The specific nature of capital applied is crucial and usually a firm would seek to finance their projects in a pecking order, first with retained earnings and if this is not available with debt capital and lastly utilizing equity capital as a final option (Myers and Majluf, 1984).

In a nutshell, the current treatise submits that a repetitive momentum in implementing mergers and acquisitions or product innovations would also imply a repetitive momentum in financing such strategic events as distinguishable from a one-time ability to raise capital. Therefore, an important requirement for achieving organizational growth is the ability to preserve strategic momentum in financing mergers and acquisition as well as product innovations, which in combination or in isolation furnishes a firm with the privilege to develop the critical resources and the organizational agility necessary to generate and sustain the equilibrium of the firm's competitive advantage within its industry and upon which a consistent organizational growth can be founded.

2.5 Positional Momentum or Feedback Strategies in Scaling

Greve (2013) posited that feedback strategies occurs when an organization lingers and extends existing actions when they are connected with positive results and attempt alternative actions when current actions are accompanied by negative outcomes. It is proposed herein that theories at the core of firm routines and proficiencies as well as theories centered upon managerial perception, which are associated with organizational growth, imply the manifestation of feedback strategies in scaling when they are predicated on the outcomes of prior actions. As a firm implements actions over time it builds routines and proficiencies, which in turn transform into autonomous engines for additional actions (Levitt and March, 1988). This theory is closely related to the findings by Weiss and Wittkopp (2005), which posits that innovations are favorably associated with the firm's market share and additionally by Blundell, Griffith and Reenen (1999), who examined the pragmatic connection among technical innovations, market share as well as financial market value and established that the effects of innovation on financial market capitalization is greater for organizations with more extensive market shares. Therefore, it seems reasonable to infer that firms tend to strive to accomplish more growth when prior organizational efforts to expand their market shares are greeted with success, reflecting on the firm's market capitalization.

2.6 Industry Concentration

Certain economic and technical attributes of an industry structure can fundamentally underlie the industry's profitability (Porter, 1980). Porter (1980) asserted that these underlying industry attributes



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together with other forces that are external to an industry account for the competitive forces of an industry. These forces include the threat of new entry, threat of substitutes, the bargaining power of buyers, the negotiating power of suppliers and rivalry among competitors (Porter,1980), Obu (2022) extends the Porter's five forces framework into a seven-structure paradigm, incorporating additional competitive forces within an industry, including: the power of lenders and the optimal capital structure of the industry. This paper argues that one implication of the seven-structure paradigm is that industry concentration can emanate from as well be a product of a combination of some of the competitive forces. Specifically, industry concentration can be both a function of and a determinant of both the threat of new entry and rivalry among competitors.

The effects of industry concentration (or the combination of the threat of new entry and rivalry among existing industry players) underlies the degree to which firms existing in an industry will, by reason of intensive competition, be compelled to passing the value they generate to buyers by way of lesser prices or dissipating it through a more elevated level of aggressiveness in seeking for customers or greater costs of competing (Porter, 1980). The degree of industry concentration is not cast in stone. It can transform following a series of product innovations in the industry. Weiss (1963) observed that a favorable relationship exists between changes in industry concentration, product differentiation, and transformations in plant sizes (which represents economies of scale of the plant). Given that one of the ways a firm can achieve competitive advantage is by product differentiation (Porter,1980); that a firm's capacity for creating a competitive benefit is crucial to delivering superior organizational performance in terms of growth and profitability (Majeed, 2011); and also that changes in product differentiation is positively related to changes in industry concentration (Weiss,1963), it can thus be argue that a firm that implements product innovation in a concentrated industry stands a huge chance of capturing market share. This is further corroborated by the findings that firms that invested in artificial intelligence encountered a more rapid growth in both revenue and employment (Babina, Fedyk, He, & Hodson, 2020).

Overall, one can assert that a firm's inclination towards developing and maintaining extensive competencies in continuous product innovation as well as for embarking on repeated mergers and acquisitions is likely to generate more favorable results in terms of economically profitable growth if executed in a concentrated industry. Therefore, by implication, the degree of industry concentration is expected to possess a robust bearing on a firm's capacity for growth or scaling up.

2.7 Positive Network Externalities

The presence of network externalities on the demand side of an industry can impact on the ability of industry players to scale and can equally affect the nature of competitive strategy that is desirable for firm success. Arthur (1989) demonstrated that in a situation where two or more increasing-return technologies 'compete' for 'market' share among probable users, inconsequential actions may accidentally confer upon one of them an initial lead in product acceptances. Then the technology with the initial lead may progress more than its rivals and appeal to a broader segment of potential users, gaining additional acceptances and becoming further advanced. Therefore, a technology that fortuitously achieve an initial lead in adoption may ultimately 'corner the market' of budding adopters, while the other technologies find it challenging to penetrate the market or experience being locked out. Srinivasan, Lilien, & Rangaswamy (2004) observed that network externalities are accounting for a progressively imperative function in the economy, with noteworthy consequences for market strategies of organizations. They demonstrated that the presence of



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network externalities can exhibit an unfavorable major impact on the subsistence period of innovators. Notwithstanding, with regards to more sweeping products, and with respect to technically penetrating products, growth in the occurrence of network externalities is associated with an enlarged existence period. They further posited that the bigger the size of the innovative firm, the greater the degree to which network externalities enhances its persistence period, while already existing pioneers saw a decline in survival period in comparison to new entrants. Even though there is a tendency for network externalities to result in industry concentration and preempt entry, there are conditions under which entry is successful at equilibrium (Katz and Shapiro, 1992). Katz and Shapiro (1992) also highlighted that there is a common presupposition that markets with network externalities are characterized by excess inertia and exhibit bias towards existing products. Notwithstanding, they specified conditions under which equilibrium is associated with inadequate friction. In other words, there are circumstances in which at equilibrium, the market will display an inclination to rush into novel, incompatible technologies.

Overall, one can argue that industries with network externalities have a tendency to navigate towards a setting in which there exists a high degree of industry concentration, creating sustained growth for incumbents. However, a new entrant with an incompatible technology embodied in a differentiated product stands a chance of successfully gaining entry and achieving market share also. This was empirically epitomized by the successful entry of TikTok into the social media ecosystem, which hitherto was dominated by Facebook (Now Meta Inc).

2.8 Research Hypothesis

Taking into account the implications of the theories discussed above for organizational growth, the following hypotheses were formulated.

Hypothesis I

The rate of growth of the revenue of an incumbent firm is directly proportional to its repetitive momentum in product innovation; its repetitive momentum in financing commercialization of product innovations as well as mergers and acquisitions; its positional momentum or feedback strategies in scaling up; and the extent of positive network externalities that exists on the demand side of its product market but inversely proportional to the degree of concentration of its industry.

Hypothesis II

The rate of growth of the revenue of a new entrant is directly proportional to its repetitive momentum in product innovation; its repetitive momentum in financing commercialization of innovation as well as mergers and acquisitions; its positional momentum or feedback strategies in scaling up; the degree of concentration of its industry; and the extent of incompatibility of its technology if operating in a market where positive network externalities exist on the demand side of the product that it offers.

These hypotheses were by regressing data for industry revenue in year, $t+1$, against data in year, t , for a number of variables that proxy for repetitive momentum in product innovation; repetitive momentum in financing commercialization of innovation as well as mergers and acquisitions; positional momentum or feedback strategies in scaling; the degree of concentration of its industry; and the extent of positive network externalities. The test is implemented in the ensuing section.



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3. Research Approach and Data Sources

The basic data consist of firm revenue, proceeds of public equity offerings (which is the sum of the proceeds of initial public offerings and seasoned equity offerings) & proceeds of bond issuances, and other applicable accounting data of the firms that were studied. The statistics on public equity offerings and annual Nordic bond issuances were generated from Refinitiv Eikon data services for the period ranging from 1990 up till 2020. The accounting data are obtained from Wharton research and data services for the period ranging from 1990 to 2020. The data that is available for accounting variables from the database of Wharton research and data services were reported using ISO currencies of each particular Nordic state. For instance, the statistics for Danish firms were reported using Danish Kroner and in the same manner for the remainder of four Nordic countries incorporating Norway, Sweden, Iceland and Finland. As a result, the currency of the data for each organization from each corresponding Nordic country were converted to the United States Dollars by applying past exchange rates that can be accessed on the website of the central bank of each Nordic country or that of the IMF website as found appropriate. A summary of the historical exchange rates applied is shown as Table I in the appendix.

In the final analysis, the currency-transformed data for each firm were aggregated to produce industry data. Accuracy of industry classification is ensured by utilizing the general industry classification (GIC) codes. Nevertheless, data for the financial industry was not included because firms in that industry on the average are significantly more levered compared to the average firm in the other industries. Excluding the financial industry is obligatory in a bid to prevent outliers in the regression, which are capable of spelling negative repercussions such as spurious regressions.

Finally, the data applied in this research work comprises of aggregated data of industry revenue, proceeds of both public equity offerings & bond issuances for industries, and other relevant accounting data of the firms incorporated in this project, but which are amalgamated into industry data. A summary of the data applied in this essay is demonstrated in Table 2 in the appendix. All figures are in millions of US Dollars.

3.1 Dependent Variables

The dependent variable constitutes the total revenue for all companies under study. Sales figures for year, $t+1$, is regressed against the data for year, t , for the control variables. The use of data about sales for a similar year as the independent variables would likely produce a spurious relationship because of simultaneity.

3.2 Independent Variables

The independent variables encompass the following: strategic momentum in product innovation and mergers and acquisition; repetitive momentum in financing commercialization of product innovation as well as in mergers and acquisition; positional momentum or feedback strategies in scaling; industry concentration; positive network externalities; organizational agility; and organizational learning. Proxies for these variables were established in a manner that is explained in the subsequent section. The argument of this treatise is that when a firm exhibits repetitive momentum in product innovation and mergers and acquisitions; and positional momentum or feedback strategies in scaling up, it will definitely have an expanding or rapidly growing capital expenditures. It is the submission of this paper that it is practically impossible for a firm to commercialize new product innovations or exhibit some form of repetitive



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tendencies in scaling up without such events being reflected in its capital expenditures to some degree. My argument is further buttressed by the findings of a research, which demonstrated that capital expenditures, when viewed as the equivalent of practical transformations encapsulated in new machinery and capital equipment, may be very important in the generation of novel patentable objects from scientific organizations. For patents emanating from European patent office, the role of capital expenditures seems to be of greater significance than that induced by investments in research and development (Piergiovanni and Santarelli, 2013). In accounting for mergers and acquisitions, the rule is to apportion the cost of a business combination separately to the recognizable net assets purchased in addition to the goodwill (International Accounting Standards Board (IASB)). Thus, the cost of implementing mergers and acquisition will reflect as an increment in the net assets of the acquirer in the same manner as capital expenditures. Given this prevailing theory cited above and the international financial reporting standard on business combinations (promulgated by IASB), proxy for repetitive momentum in product innovation and mergers and acquisitions can be done using capital expenditures.

Other studies also showed that firm investments in process-oriented research and development (R&D) is directly proportional to the degree of product differentiation and additionally that organizations deploy their resources to a greater extent in product R&D in situations where they can implement process R&D than in circumstances where they lack the competency (Lin and Saggi, 2002). Therefore, a research and development variable in the econometric model was incorporated to serve as an additional proxy for repetitive momentum in product innovation.

This treatise is there of the position that when a firm exhibits strategic momentum in financing either commercialization of product innovations or mergers and acquisitions, it will seek to finance such activities first with retained earnings and if this is not available with debt and finally it will use equity as a last resort in accordance with the pecking order theory of financing (Myers and Majluf, 1984). Therefore, one can proxy for strategic momentum in financing commercialization of product innovations as well as mergers and acquisitions using both the proceeds of public equity offerings (PEO) and bond issuances (BI).

Blundell, Griffith and Reenen (1999) demonstrated that innovation can have effects on a firm's market capitalization and further established that these effects of innovation on a firm's market capitalization is greater for organizations with larger market shares. Therefore, it seems reasonable to proxy for feedback strategies in scaling up using the firms market capitalization.

This study applied the Herfindahl Index to evaluate the extent of concentration in each industry. The Herfindahl index is estimated to be the sum that is attained when the market shares of every firm in a specific industry is squared for a specific annual period. Market share can be defined as the aggregate sales of the firm in a particular year divided by the aggregate revenue of the industry in that particular year. The value of this index ranges from zero to one, where industries with the greatest degree of competition hold a value of zero, while those industries with the greatest degree of monopoly power are associated with a value of one. The existence of positive network externalities has a tendency to result in industry concentration and preempt entry as demonstrated by contemporary researchers (Katz and Shapiro, 1992). Therefore, it would not be necessary to assign a proxy for positive network externalities.

It can be deduced from above that both organizational learning and the resultant organizational agility enhances a firm's creativity, innovativeness and ability to adjust to transformations in a dynamic business



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environment. Having the characteristics of organizational learning and agility are reflected in a firm's proclivity towards product innovation and mergers and acquisition. Therefore, proxy is unnecessary for these attributes separately.

The last control variable in the regression analysis is the number of firms that are present in an industry and it is present in one of the two separate regressions that was undertaken. All variables are the same in both regressions except for the fact in the first, industry concentration was included as a control variable and in the second, number of firms was used in place of industry concentration. It is the position of this treatise that industry concentration and number of firms should not be included in the same regression model because the number of organizations within an industry is a mirror image of the degree of concentration of the industry. The greater the quantity of organizations in an industry, the less the degree of industry concentration and vice versa.

3.3 Data Analysis

The impact of changes in the following variables, including repetitive momentum in product innovation; repetitive momentum in financing commercialization of innovation & mergers and acquisition; positional momentum or feedback strategies in scaling up, industry concentration on the total revenue of the companies under study using a multiple linear regression were estimated.

The econometric regression model is expressed generally as follows.

Dependent Variable = $\beta_0 + \beta_1$ Control Variables + Error term

More specifically, the following regression models were initially estimated without interaction terms.

$$SALES_{t+1} = \beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 CONCENTRATION_t$$

$$SALES_{t+1} = \beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 NFIRMS_t$$

Additionally, the following regression models with interaction terms were estimated.

$$SALES_{t+1} = \beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 CONCENTRATION_t + \beta_7 (CAPEX_t * RD_t)$$

$$SALES_{t+1} = \beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 NFIRMS_t + \beta_7 (CAPEX_t * RD_t)$$

And finally,

$$SALES_{t+1} = \beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 CONCENTRATION_t + \beta_7 (CAPEX_t * CONCENTRATION_t)$$

$$SALES_{t+1} =$$



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$$\beta_0 + \beta_1 PEO_t + \beta_2 BI_t + \beta_3 CAPEX_t + \beta_4 RD_t + \beta_5 MKTCAP_t + \beta_6 NFIRMS_t + \beta_7 (CAPEX_t * NFIRMS_t)$$

A robustness check was conducted for the results of the regression to assess its validity in order to assure that the assumptions which underpin the multiple linear regression model have not been violated. Thus, it is necessary to check whether the regression model is likely to suffer from omitted variable bias and additionally the possibility that it violates the homoskedasticity assumption. These tests in STATA can be implemented by executing the Ramsey RESET test for omitted variable bias or functional form specification and the Breusch-Pagan test respectively. However, given that public equity offerings occur in waves and the clustering of firm data, robust standard errors were used for this study.

4. Research Results

4.1 The Effects of Firm and Industry Characteristics on Organizational Growth without Interaction Terms

Table 3 in the appendix shows the outcomes of two distinct regressions. The results of the estimation in Table 3 shows that statistically significant results are obtained for the coefficients of all of the independent variables except for public equity offerings and firm market capitalization. The results of the econometric regression can be interpreted in more details as follows.

In the first regression results, it is observed that the coefficients of public equity offerings and market capitalization are not statistically significant even at the 10% level. The coefficient of bond issuances is -7.727 and is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in bond issuances in the current year is likely to bring about a -7.727 decrease in sales for the next year, holding all other factors constant. The coefficient of capital expenditures is 11.17 and is statistically significant. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 11.17 increase in sales for the next year, holding all other factors constant. This result is consistent with the findings of Piergiovanni and Santarelli (2013), who demonstrated that capital expenditures, when viewed as the equivalent of practical transformations encapsulated in new machinery and capital equipment, may be very important in the generation of novel patentable objects from scientific organizations and that for patents emanating from European patent office, the role of capital expenditures seems to be of greater significance than that induced by investments in research and development. The coefficient of research and development expenditures is -0.136 and is statistically significant. This can be interpreted to mean that a one unit increase in research and development expenditures is likely to bring about a 0.136 decrease in sales for the next year, holding all other factors constant. The coefficient of industry concentration is -88,861.9 and is statistically significant. This can be interpreted to mean that a 0.01 unit increase in industry concentration in the present year is likely to bring about an 888.62 decrease in sales for the next year, holding all other factors constant. This result is consistent with the findings of Weiss (1963), who observed that a favorable relationship exists between changes in industry concentration, product differentiation, and transformations in plant sizes (which represents economies of scale of the plant).

In the second regression results, it is observed that the coefficients of public equity offerings and market capitalization are also not statistically significant just as it is in the first. The coefficient of bond issuances is -6.030 and is statistically significant at the 5% level. This can be interpreted to mean that a one unit increase in bond issuances in the current year is likely to bring about a -6.030 decrease in sales for the next year, holding all other factors constant. The coefficient of capital expenditures is 7.251 and is statistically



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significant at the 1% level. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 7.251 increase in sales for the next year, holding all other factors constant. The coefficient of research and development expenditures is -0.166 and is statistically significant at the 5% level. This can be interpreted to mean that a one unit increase in research and development expenditures is likely to bring about 0.166 decrease in sales for the next year, holding all other factors constant. The coefficient of the number of firms variable is 1276.3 and is statistically significant at the 1% level. This can be interpreted to mean that a 1 unit increase in the number of organizations in the industry in the current year is likely to bring about a 1284.0 increase in sales for the next year, holding all other factors constant.

The robustness of these results was verified in addition to using robust standard errors, by conducting the Ramsey RESET Test for omitted variables. For the first regression, the test generated an F-value of 1.74 and a p-value of 0.16, confirming that there are no omitted variables that are statistically significant at the 5% level and a presence of a properly formulated model. Additionally for the second regression, the test produced an F- value of 0.19 and a p-value of 0.91, also confirming that there are no omitted variables that are statistically significant and a properly formulated model.

4.2 The Effects of Firm and Industry Characteristics on Organizational Growth with Interaction Terms between Capital Expenditures and Research and Development Expenditures.

Table 4 in the appendix shows the results of two distinct regression analysis when interaction terms between capital expenditures and research and development expenditures was incorporated. The results of the regression, in Table 4 in the appendix below, shows that no statistically significant results are obtained for the coefficients of public equity offerings and market capitalization. The results of the econometric regression can be interpreted in more details as follows.

In the first regression results, it is observed that the coefficients of public equity offerings and market capitalization are not statistically significant. The coefficient of bond issuances is -5.038 and is statistically significant at the 10% level. This can be interpreted to mean that a one unit increase in bond issuances in the current year is likely to bring about a 5.038 decrease in sales for the next year, holding all other factors constant. The coefficient of capital expenditures is 6.232 and is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 6.232 increase in sales for the next year, holding all other factors constant. The coefficient of research and development expenditures is -2.360 and is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in research and development expenditures is likely to bring about a 2.360 decrease in sales for the next year, holding all other factors constant. The coefficient of industry concentration is -86,167.1 but it is not statistically significant. However, with a test statistic of 1.96 it is at the borderline of the presence of or not of statistical significance. That said, one cannot attach any interpretation to the coefficient. The coefficient of the interaction term between capital expenditures and research and development, is 0.000176 and it is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in the magnitude of capital expenditures, when in combination with research and development expenditures for the current year is likely to result in a 0.000176 increase in next year sales all other factors held constant.

In the second regression results, it is observed that the coefficients of public equity offerings and market capitalization are also not statistically significant just as it is in the first. The coefficient of bond issuances is -



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5.904 and is statistically significant at the 10% level. This can be interpreted to mean that a one unit increase in bond issuances in the current year is likely to bring about a -5.904 decrease in sales for the next year, holding all other factors constant. The coefficient of capital expenditures (CAPEX) is 6.927 and is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 6.927 increase in sales for the next year, holding all other factors constant. The coefficient of research and development expenditures is -0.406 but it is not statistically significant at the 10% level. The coefficient of the number of firms variable is 1,222.0 and is statistically significant at the 10% level. This can be interpreted to mean that a 1 unit increase in the number of firms in the industry in the current year is likely to bring about a 1222.0 increase in sales for the next year, holding all other factors constant. The coefficient of the interaction term between capital expenditures and research and development, is 0.000194 but it is not statistically significant at the 10% level.

The robustness of these results was verified, in addition to using robust standard errors, by conducting the Ramsey RESET Test for omitted variables. For the first regression, the test generated an F-value of 0.94 and a p-value of 0.42, confirming that there are no omitted variables that are statistically significant at the 5% level and a presence of a properly formulated model. Additionally for the second regression, the test produced an F-value of 0.26 and a p-value of 0.85, also confirming that there are no omitted variables that are statistically significant at the 5% level and a properly formulated model.

4.3 The Effects of Firm and Industry Characteristics on Organizational Growth with Interaction Terms between Capital Expenditures and Industry Concentration as well as between Capital Expenditures and Number of Firms

Table 5 in the appendix shows the results of two distinct regression analysis when interaction terms between capital expenditures and industry concentration for the first regression below as well as between capital expenditures and number of firms in the industry for the second regression below were incorporated. The results of the estimation in Table 5 below shows that across both regressions no statistically significant results are obtained for the coefficients of public equity offerings and market capitalization. The results of the econometric regression can be interpreted in more details as follows.

In the first regression results, it is observed that the coefficients of public equity offerings and market capitalization are not statistically significant. The coefficient of bond issuances is -4.560 but it is not statistically significant at the 10% level. The coefficient of capital expenditures is 14.78 and is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 14.78 increase in sales for the next year, holding all other factors constant. The coefficient of research and development expenditures is -0.129 and is statistically significant at the 10% level. This can be interpreted to mean that a one unit increase in research and development expenditures is likely to bring about a 0.129 decrease in sales for the next year, holding all other factors constant. The coefficient of industry concentration is -67,298.1 but it is not statistically significant. The coefficient of the interaction term between capital expenditures and industry concentration is -13.41 and it is statistically significant at the 5% level.

In the second regression results, it is observed that the coefficients of public equity offerings and market capitalization are also not statistically significant just as it is in the first. The coefficient of bond issuances



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(BI) is -5.825 and it is statistically significant at the 10% level. This can be interpreted to mean that a one unit increase in bond issuances in the current year is likely to bring about a 5.825 decrease in sales for the next year, holding all other factors constant. The coefficient of capital expenditures is 6.784 and it is statistically significant at the 1% level. This can be interpreted to mean that a one unit increase in capital expenditures in the current year is likely to bring about a 6.784 increase in sales for the next year, holding all other factors constant. The coefficient of research and development expenditures is -0.162 and it is statistically significant at the 10% level. This can be interpreted to mean that a one-unit increase in research and development expenditures is likely to result in a 0.162 decrease in sales, holding all other factors constant. The coefficient of the number of firms in the industry variable is 1,209.5 but it is not statistically significant at the 10% level. The coefficient of the interaction term between capital expenditures and the number of firms in the industry is 0.00776 but it is not statistically significant.

The robustness of these results was verified, in addition to using robust standard errors by conducting the Ramsey RESET Test for omitted variables. For the first regression, the test generated an F-value of 1.39 and a p-value of 0.25, confirming that there are no omitted variables that are statistically significant at the 5% level and a presence of a properly formulated model. Additionally for the second regression, the test produced an F-value of 0.38 and a p-value of 0.77, also confirming that there are no omitted variables that are statistically significant and a properly formulated model.

5. Discussions and Implications for Entry Strategy and Financing of New Ventures

From existing theory, the current paper was able to establish economic structures and strategic behaviors of firms that are fundamental for scaling up or organizational expansion, denoting them as microfoundations. In moving forward, the paper provided some hypotheses about the determinants of organizational growth. The validity of these hypotheses was tested using multiple linear regression on firm data for companies in the Nordic region. A recapitulation of the results obtained from the regression analysis shows that organizational growth is basically determined by a firm's capacity for effectively raising and deploying equity capital to finance the implementation of product innovation or mergers and acquisition, when operating in an industry with an associated high degree of industry concentration and or in a market that is characterized by positive network externalities on the demand side of its product market.

Although a firm's ability to raise capital is a necessary condition for organizational growth nevertheless it is not sufficient. From the results of this research work, one can observe that there is no statistically significant effect of using equity capital in financing projects that can result in sales or create organizational growth through product innovations or mergers and acquisitions. Additionally, financing using debt imposes a negative effect on sales, which is statistically significant. This seems reasonable in situations in which a firm is not successful in its product market. This is because the firm must pay interest and pay back the debt regardless of the revenue-generating ability or the profitability of the project financed using the debt capital. And over time, there will be a reduction in the firm's capital if it is not profitable enough to cover the interest payment and debt repayment and make provision for extra capital to finance operations and future growth. Therefore, the current treatise submits that financing or capital alone cannot account for organizational growth. For growth to take place, the capital raised must also be effectively deployed into products or projects that have a positive net present value.



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Thus, the findings above underscores the necessity for a firm to be able to effectively maintain a strategic momentum in product innovations as well as in mergers and acquisitions if it must maximize the probability of achieving significant growth in the economic activities that it pursues. However, some features of the industry structure would matter including the number of firms in the industry or the degree of industry concentration. From the results of the regression analysis implemented above an increase in industry concentration brings about a reduction in industry output and vice versa. Proportional output variation in consistency with the intensity of industry concentration is in harmony with both the theory of monopoly and perfect competition, which are extremes in the spectrum of industry concentration. The monopolist can choose either output or price but cannot simultaneously select both in a bid to maximize its profits. Unfortunately, a monopolist has an incentive to choose an output level that is less than the equilibrium output and that creates a deadweight loss for the society. So, it is reasonable to expect that industry output will rise with the entry of new firms into a highly concentrated industry. In our regression results, a statistically significant negative effect was observed on future sales that results from the increase in the interaction or combination of capital expenditures and industry concentration, demonstrating the plausibility of making product innovations in highly concentrated industries.

With continual entry of firms into an industry, the expectation is that industry output will tend to be maximized in the case of a perfectly competitive market. The maximization of industry output does not bode well for a firm functioning in a perfectly competitive market given that the firm's output is bound to be small amidst the absence of economic profits in consistency with the prediction of the theory of perfect competition. This would imply that the average supply of a firm where there are large numbers of firms or a large number of differentiated products in the industry will inevitably be small. Therefore, one could argue that the growth rate or average sales of an innovative firm with adequate access to financial resources in the form of equity capital, would be higher in a concentrated industry than if the firm's industry was to be populated with a large number of players.

Existing theory of organizational economics also buttresses the potential for success to emanate from product innovation in a highly concentrated industry that is financed using equity capital. Robinsona (1999) observed that over ninety percent of entrepreneurial firms enter industries that are associated with a small extent of industry concentration in addition to a substantial depth of product differentiation. In the midst of this short extent of industry concentration as well as numerous differentiated products, Robinsona (1999) additionally observed that neither industry concentration, product differentiation nor entry barriers possessed a statistically significant connection, at the 10% level, with certain specified measures of entrepreneurial firm performance investigated in his study. Sandberg and Hofer (1987) observed that the interactive consequences of industry structure, strategy, and the characteristics of the entrepreneur had a more significant effect on the performance of new ventures than any of the variables in seclusion. Moreover, they posited that discounting interactive effects, industry structure demonstrated a greater bearing on the performance of new ventures than either the firm's strategy or the capabilities of the entrepreneur. Chrisman, Bauerschmidt, and Hofer (1998) extended Sandberg & Hofer's (1987) paradigm for determination of the performance of a new venture, to incorporate and emphasize the significance of the entrepreneurial firm having a robust mix of assets, organizational design, processes, and systems in place in order to successfully execute its strategy and accomplish its goals. Important forces of competition within the industry, including the threat of entry and the extent of industry rivalry (Porter,1980), are in harmony with, influenced and or determined by the degree of industry concentration. Network externalities have a



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tendency to produce similar effects as industry concentration. Tanriverdi and Lee (2008) posited that given the existence of network externalities, complementary interrelated diversification strategies in consumption and production can be crucial for attaining favorable returns to intra-industry diversification.

Underscoring the essence of equity financing, Bettignies and Duchêne (2014) demonstrated that there is a magnitude of entrepreneurial risk that makes bank financing optimal if and solely if the entrepreneurial risk is underneath that threshold. They further posited that competition in product markets strengthens the value of sturdier entrepreneurial motivations and therefore elevates the maximum level of risk the entrepreneur is willing to accept prior to substituting venture-capital funding for bank financing. Eventually equity is the hallmark for risk minimization in financing new ventures. With a repetitive momentum in raising equity capital, a new venture can re-strategize its activities and rectify enduring mistakes in its business model that otherwise could mean a collapse of the venture. Coelho and McClure (2005) detected that catastrophe may result in eventual accomplishments both in natural ecosystems and in the business environment. They further posited that analogous to the ways dynamic ecologies are dependent on bereavement for substituting robust growth for ageing creatures, the discontinuation of non-value-adding economic activities is crucial for development of new springboards for wealth formation.

It is certainly more challenging to make a strategic entry into highly concentrated industries in consistency with findings in prior research. For instance, Robinsona (1999), suggested that the comparative non-appearance of entrepreneurial firm entry into industries that are associated with significant intensity of concentration and short levels of product differentiation lends credence to previous theory, which recommends that effective entry in such industry settings may be considerably more problematic. Notwithstanding, entrepreneurs must strive desperately to make such entries because they are more likely to pay off, as evidenced in this study, than becoming a player in a fragmented industry. A venture capitalist may have more exit opportunities when it finances a new venture in a highly concentrated industry than one in a fragmented industry. Hollenbeck (2020) demonstrated that under typical industry situations, the expectation of a buyout generates a powerful motivation for organizations to make a preemptive entry into an industry and deploy resources to create an opportunity for themselves to be a potentially striking merger partner.

Therefore, start-ups have a significantly greater probability of success if they aspire to develop entry strategies that are centered on product innovations, which target well established and highly concentrated industries, while financing the entrepreneurship with equity capital. Additionally, venture capital firms are likely to be more successful if they elect to invest in innovative firms or new ventures that are present in highly concentrated industries that are associated with a large market size, holding all other factors constant. When an industry is highly fragmented and characterized by a large number of firms, new ventures with innovative products and significant capital might still not be able to achieve economic profits because the new venture must force prices down to make significant sales thereby eroding its potential profitability and to some extent the industry profitability, eventually culminating in substantial long-term venture capitalist investment losses. This line of thought was epitomized in the case of UBER's entry into the taxi industry (first in America and later in other countries) with an innovative service, offering customers the opportunity to order for a ride on an app. Uber came in with huge capital and a better service. Presently, UBER has been able to garner a total funding of USD 25.2 Billion (Crunchbase, Inc, 2022). However, for the first quarter of 2022, it reported a negative earnings per share of USD 3.03 (Investopedia,



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2022). Uber gained significant popularity, thanks to massive investment in advertising, and captured a fair share of the market but have struggled to achieve consistently good profitability. Another case in point is that of e-commerce retailer, Jumia Technologies AG, which pioneered e-commerce business in Nigeria and other parts of Africa in 2012. Jumia had made an entry into the highly fragmented retail sector in Africa and up till date it has been experiencing extremely challenging times in the operation of its business. Jumia Technologies AG has been well financed, having received a total funding of USD 1.2 Billion (Crunchbase Inc, 2022). Notwithstanding, the embattled e-commerce retailer had recently reported a quarterly revenue of USD 47.59 Million and an associated loss of USD 69.46 Million as at March 2022 (Jumia Technologies AG, 2022). This is because just as the current study have already explicated, it will be hard to scale up in an industry with a very low degree of industry concentration, holding all other factors constant, because the market structure is such that the large number of existing players could always (and would always do) enable the market to operate close to its maximum output without any prospects for economic profits, potentially leaving minimal room for an ambitious player to win a substantial share of the market and scale.

Among the new-business creatures that are able to walk through the valley of death, the vast majority of those that eventually evolve into a unicorn do so in highly concentrated industries. Historical antecedents demonstrate that some of the most successful start-ups within the least four decades such as Amazon, Dell, Facebook, Google, Apple and Netflix individually made an entry into a highly concentrated industry or at least an industry that was highly concentrated at the time of their entry or an industry associated with a high level of positive network externalities. Amazon Inc pioneered the ecommerce business in an increasingly concentrated US retail industry and today, it is the second largest player in that industry by revenue. The original desktop and mass-marketable computer, “the programma 101” was devised by Pier Giorgio Perotto and manufactured by Olivetti. It was first revealed and sold to the general public at a global fair in New York city in 1964 at a price of \$3,200 (Computer Hope, 2021). Between this period and 1984, when Dell Inc came into existence, a few players including Hewlett Packard, Compaq, IBM and Commodore made entries into the fledging computer industry and participated in the production and marketing of desktop computers. Notwithstanding the presence of these long-standing firms with well-established brands and significant resources in a highly concentrated industry, Michael Dell introduced product innovations in the formation of Dell Computers in 1984 that saw the new venture not only thrive in the midst of gigantic competitors but also become a major player in the industry as we know currently. Facebook (now Meta Inc) evolved at a time myspace.com was already becoming the dominant player but with an overall few number of participating firms in the social media industry. However, by incorporating some social-media strategies such as focusing on college communities, it was able to outperform myspace.com beginning from 2008. The recent intrusion by TikTok into the social media ecosystem is additional evidence that product innovation in an industry characterized by high degrees of industry concentration or a market associated with positive network externalities can be a proven route for success. Yahoo was the dominant search engine after displaying Alta vista with a better product in the internet search engine domain. Yahoo itself became less prominent following the emergence of a faster search engine courtesy of google.com. On the 3rd of April, 1973, Motorola openly proved its invention, namely the world’s earliest mobile phone and system and facilitated the very first public calls by applying a technology that was referred to as the “Motorola DynaTAC (DYNAmic Adaptive Total Area Coverage) technology”, an event which took place in New York City (Motorola Mobility LLC, 2022). However, the entrance of Apple



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and other global players with products that were characterized by a deeper level of innovation into the highly concentrated mobile phone business domain resulted in the displacement of Motorola and eventually forcing the firm to exit the industry in 2010. The final example in this paper, along this dimension of a firm winning by making an entry with a superior product or an innovative business model into a highly concentrated industry, is that of Netflix. When Netflix inaugurated its operations in 1997, Blockbuster was the dominant player and the unquestionable champion of the video-renting industry. Blockbuster had evolved, beginning in 1985 with a brick-and-mortar rental strategy and developed from its initial location in Texas, USA to a further two thousand and eight hundred locations globally. Netflix made a strategic entry into this highly concentrated industry with a novel business model that shortened the video-rental process, creating a more pleasurable experience for customers. Needless to emphasize how successful the outcome turned out to be as it is known today.

Start-up Savant (2022) observed that among the best start-up industries, the top two on the basis of revenue are e-commerce and food delivery. They noted that retail ecommerce global revenue attained \$4.28 trillion in 2020. In the same vein, the food delivery industry has encountered a rapid increment in demand in recent times, while the industry has been estimated to have reached a value of \$10.26 billion as at year 2020. Although e-commerce and food delivery have been sufficiently successful in the western world, the same cannot be said of emerging economies. In that case, one can argue that the difference in the success rate of these industries across these varying economies can be probably attributed to the differential rate of industry concentration of the traditional retail and delivery industries in the two above-mentioned economic hubs. Smith and Ocampo (2021) observed that increases in industry concentration have been a prominent feature of the retail industry dynamics in the course of the previous thirty years in the United States of America. Hortaçsu and Syverson (2015) showed that between 1997 and 2007, the market share of revenue attributable to the twenty biggest retail companies in the United States rose from 18.5% to 25.4%.

Amazon Inc, a pioneer of ecommerce in the United States have become a global behemoth, on the other hand Jumia Technologies AG, a pioneer of ecommerce in Africa has been engulfed in an unending series of losses that exceeds its sales. While the early years of Amazon Inc were associated with persistent losses, however, with a significant growth in sales and a strong market capitalization, Amazon had an opportunity to acquire a major profitable player in the US retail industry, which turns out to be Wholefoods, resulting in a transformation of the fortunes of Amazon from persistent losses to significant profitability. Whether Jumia Technologies AG would have the opportunities for a similar acquisition is very doubtful given a plethora of factors including the fact that Jumia's market capitalization, sales and rate of growth of sales is minuscule in comparison to the capital invested in the entity. The African retail industry is highly fragmented; and finally, hardly is there a presence of a retail chain that could become available for acquisition in the near future.

6. CONCLUSION

This paper surveyed and discussed the prevailing theories that have established various grounds for organizational growth. On the premise of these theories, proven microfoundations of organizational growth were hypothesized. This study tested these hypotheses by applying accounting and market data for



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all publicly listed Nordic firms over an elongated span of time, specifically ranging from 1990 to 2021. In implementing the test, an econometric model, which is predicated on the variables that we argued are capable of serving as a proxy for the microfoundations identified, was established. It is the conclusion of this treatise, that effective commercialization of product innovations, using equity capital as against debt capital, in highly concentrated industries is the miracle as well as the foundation for achieving economically profitable organizational growth.

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APPENDIX

TABLE 1



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Table 1
Amount of United States Dollars per Unit of relevant Nordic Currency

Date	Danish Krone	Euro	Finnish Markka	Norwegian Krone	Swedish Krona	Icelandic Krona
29-Dec-1990	0.18031		0.22943	0.15989	0.15019	0.01715
31-Dec-1991	0.18031		0.22943	0.15411	0.15019	0.01691
31-Dec-1992	0.18031		0.22943	0.16113	0.15019	0.01736
31-Dec-1993	0.18031		0.22943	0.14073	0.15019	0.01474
31-Dec-1994	0.18031		0.22943	0.14180	0.15019	0.01430
29-Dec-1995	0.18031		0.22943	0.15825	0.15019	0.01543
31-Dec-1996	0.16822		0.21534	0.15522	0.12753	0.01500
31-Dec-1997	0.14650		0.18448	0.13669	0.11621	0.01409
31-Dec-1998	0.15658		0.18448	0.13158	0.11054	0.01406
31-Dec-1999	0.13516		0.18448	0.12230	0.10771	0.01381
29-Dec-2000	0.12468	1.07469		0.11301	0.10488	0.01268
31-Dec-2001	0.11891	1.01413		0.11097	0.12519	0.01023
31-Dec-2002	0.14120	0.95356		0.14356	0.13535	0.01093
31-Dec-2003	0.14966	0.79177		0.14981	0.14043	0.01303
31-Dec-2004	0.15389	0.73416		0.16560	0.14297	0.01426
30-Dec-2005	0.15813	0.84767		0.14774	0.14424	0.01591
29-Dec-2006	0.17663	0.75930		0.15987	0.14551	0.01433
31-Dec-2007	0.19703	0.67930		0.18481	0.13649	0.01562
31-Dec-2008	0.18759	0.71855		0.14288	0.12747	0.01135
31-Dec-2009	0.18287	0.69416		0.17311	0.13865	0.00809
30-Dec-2010	0.17815	0.75301		0.16984	0.14700	0.00819
30-Dec-2011	0.17405	0.77286		0.16687	0.14444	0.00862
28-Dec-2012	0.17671	0.75855		0.17967	0.15348	0.00800
30-Dec-2013	0.18475	0.72553		0.16359	0.15365	0.00818
31-Dec-2014	0.16558	0.82366		0.13453	0.12801	0.00857
30-Dec-2015	0.14641	0.91525		0.11362	0.11973	0.00758
31-Dec-2015	0.15375	0.91853		0.11352	0.11973	0.00829
30-Dec-2016	0.14179	0.94868		0.11601	0.10993	0.00937
29-Dec-2017	0.16109	0.83382		0.12188	0.12147	0.00923
28-Dec-2018	0.15339	0.87306		0.11484	0.11147	0.00815
30-Dec-2019	0.14979	0.89373		0.11364	0.10730	0.00739
23-Dec-2020	0.16356	0.82196		0.11452	0.12041	0.00787
23-Dec-2021	0.15209	0.88417		0.11297	0.10969	0.00787

This table shows the exchange rate between the currencies of the countries in the Nordic region, including Denmark, Finland, Norway, Sweden and Iceland for the period ranging from December,1990 to December 2021.



TABLE 2

DESCRIPTIVE STATISTICS

Variable	Observations	Mean	Std. dev.	Min	Max
Sales	337	57478.35	193276.4	0	3307060
Public Equity Offerings	337	1020.601	1638.683	0	13675.2
Bond Issuances	337	1323.918	2462.543	0	22269.9
Capital Expenditures	337	3032.281	4810.097	0	24746.81
Research & Devpt Expenditures	337	2489.261	29220.2	0	538647
Market Capitalization	337	138270.6	894087.1	15.94	14072510
Industry Concentration	337	.3417278	.2856817	0	1
Number of Firms	337	30.14205	34.19005	1	171

This table shows summary of the statistics and/or data that is associated with the dependent and independent variables in this study including sales, public equity offerings, bond issuances, capital expenditures, research and development expenditures, market capitalization, industry concentration and number of firms. The data for the sales variable is in respect of year t+1, while the data for the rest of the dependent variables is in respect of year t.

TABLE 3

THE EFFECTS OF FIRM AND INDUSTRY CHARACTERISTICS ON ORGANIZATIONAL GROWTH WITHOUT INTERACTION TERMS

(1) (2)



	SALES	SALES
Public Equity Offerings	- 1.417 (- 0.48)	- 6.129 (-1.45)
Bond Issuances	-7.727*** (-3.62)	-6.030** (-2.73)
Capital Expenditures	11.17*** (8.10)	7.251*** (3.72)
Research & Devpt Expenditures	- 0.136* (-2.34)	- 0.166** (-2.82)
Market Capitalization	0.00345 (0.87)	0.000796 (0.23)
Industry Concentration	- 95,156.7* (-2.19)	
Number of Firms		1,276.3*** (3.42)
Constant	68,662.9* (2.19)	11,703.5 (1.15)
No of Observations	337	337
R-Squared	0.10	0.10

This table shows the results of a multiple linear regression of sales on public equity offerings, bond issuances, capital expenditures, research and development expenditures, market capitalization, industry concentration and number of firms. Robust standard errors are applied to account for clustering by firms and are in parentheses. The following asterisks ***, **, & * denotes significance at the 1%,5% and 10% level respectively.

TABLE 4:

THE EFFECTS OF FIRM AND INDUSTRY CHARACTERISTICS ON ORGANIZATIONAL GROWTH WITH INTERACTION TERMS AMONG CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT

(1) (2)



	SALES	SALES
Public Equity Offerings	-2.745 (-0.99)	-6.026 (-1.32)
Bond Issuances	-5.038* (-2.25)	-5.904* (-2.40)
Capital Expenditures	6.232*** (5.39)	6.927*** (6.28)
Research & Devpt Expenditures	-2.360*** (-5.46)	-0.406 (-0.35)
Capital Expenditures*Research & Devpt Expenditures	0.00176*** (4.91)	0.000194 (0.20)
Market Capitalization	0.00282 (0.75)	0.000883 (0.27)
Industry Concentration	-86167.1 (-1.96)	
Number of Firms	1,222.0* (2.00)	
Constant	70,726.9* (2.27)	13,179.9* (2.34)
No of Observations	337	337
R-Squared	0.10	0.10

This table shows the results of a multiple linear regression of sales on public equity offerings, bond issuances, capital expenditures, research and development expenditures, market capitalization, industry concentration, number of firms and an interaction term between capital expenditures and research and development expenditures. Robust standard errors are applied to account for clustering by firms and are in parentheses. The following asterisks ***, **, & * denotes significance at the 1%,5% and 10% level respectively.



TABLE 5

THE EFFECTS OF FIRM AND INDUSTRY CHARACTERISTICS ON ORGANIZATIONAL GROWTH WITH INTERACTION TERMS AMONG CAPITAL EXPENDITURES, CONCENTRATION AND NUMBER OF FIRMS

	(1) SALES	(2) SALES
Public Equity Offerings	-2.460 (-0.95)	-5.965 (-1.20)
Bond Issuances	-4.560 (-1.73)	-5.825* (-2.08)
Capital Expenditures	14.78*** (6.19)	6.784*** (4.42)
Research and Devpt Expenditures	-0.129* (-2.16)	-0.162* (-2.15)
Market Capitalization	0.00326 (0.84)	0.000907 (0.28)
Industry Concentration	-67298.1 (-1.30)	
Capital Expenditures*Industry Concentration	-13.41** (-2.80)	
Number of Firms	1209.5 (1.60)	
Capital Expenditures*Number of Firms		0.00776 (0.16)
Constant	56286.5 (1.60)	13323.5* (2.38)
No of Observations	337	337
R-Squared	0.10	0.10



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This table shows the results of a multiple linear regression of sales on public equity offerings, bond issuances, capital expenditures, research and development expenditures, market capitalization, industry concentration, number of firms and an interaction term between capital expenditures and industry concentration on one hand as well as between capital expenditures and number of firms on the other hand. Robust standard errors are applied to account for clustering by firms and are in parentheses. The following asterisks ***, **, & * denotes significance at the 1%,5% and 10% level respectively.