

The effect of Incubation Programme Small, Micro and Medium Enterprises Development: A cross-sectional survey

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Abstract:

The research examines the effect of business incubation on the Small-Medium, and Micro Enterprises (SMMEs)' growth and development as perceived by incubatees in a South African context. The study addresses the challenges SMMEs had before joining the incubation programme, the entrepreneurial skills required for SMMEs success, and the entrepreneurial skills delivered on business incubation programs. The research was carried out in the province of Gauteng in South Africa. The study adopted a quantitative research methodology and a cross-sectional research design. A purposive sample of 32 Incubated SMME from 6 incubators was selected within the public incubation program of the Small Enterprise Development Agency (SEDA), evaluating the effect of business incubation on SMME development and growth. Three key outcomes were assessed to measure growth and development: increase in turnover, job creation and expansion either in markets, products and incubation programmes, and the perceived value-added of incubation support services to black-owned businesses. For the incubation program to be successful, its service offerings should be aligned with the needs of the SMMEs. Through incubation, the challenges which SMMEs identified before joining the incubation program should be eliminated. Business Advisory, Business Development, Funding and Lack of access to infrastructure are the most prevalent barriers faced by SMMEs before to joining the incubation program.

Keywords: Business incubation, enterprise development, entrepreneurial skills, SMMEs

1 Introduction

SMMEs in South Africa are pivotal drivers of job creation, alleviating high levels of unemployment and poverty. However, many start-ups and SMMEs do not make it through

the first two years of their existence, despite government's intervention through the rollout of incubation programmes. Challenges faced by SMMEs are broad and vary by the area where these SMMEs operate and by the industrial sector. Some of these SMMEs include the inability to access market opportunities, lack of sponsorship, and poor business strategy (Lose and Tengeh, 2015). Poor business strategy may be induced by a lack of managerial skills and competencies of SMME owners and limited institutions to offer financial intermediary and support (Asah et al., 2015 and Marivate, 2014). As a result, many SMMEs do not reach their full potential, with the lost economic growth opportunity, job creation and poverty alleviation. It is against these challenges that the worldwide economic climate identified the need for effective assessment and support in the SMME

sector. Among the interventions needed to increase SMME effectiveness are support to upskill, empower, and bring about the turnaround for SMME development, growth, and success. The effectiveness of business incubation in enhancing entrepreneurial skills and improving access to finance and markets to SMME's organisational success and development needs to be evaluated. This will ensure that success in the business incubation programme is properly measured.

2 Literature review

Some of the key challenges facing SMMEs' growth in developing countries include meeting local and global competition from well-established businesses (Urban and Naidoo, 2012). In addition, SMMEs competitiveness in developing countries is hindered by a lack of human resource and development skills and access to adequate finance (Urban and Naidoo, 2012). The sustainable profitability of the SMMEs that are in their start-up phases is undermined by inadequate business, managerial, auditing, networking and accounting skills, lack of collateral, difficulty in securing a loan, poor vocational training, and poor mentorship support from various agencies whose duty is to promote and monitor the SMME sector of the economy (Asah, Fakoti & Rungani, 2015; Marivate, 2014). Business incubation is one of the strategies that support entrepreneurs by promoting the creation and growth of entrepreneurial venture (Choto, 2015).

Incubators are most successful when their mission and goals are aligned with the entrepreneur's needs and sponsoring organisations (Isabelle, 2013). To maximise the benefits of incubator programs, entrepreneurs need to consider the BI (Business Incubators) core offering before signing up (Isabelle, 2013). Incubation should not be an exercise taken within the agenda of a corporate social investment initiative but a significant intervention to drive economic growth. Business incubators (BIs) have to overcome several challenges to equip SMMEs with relevant skills (Lose and Tengeh, 2015). Despite these studies on the valuable contribution this can bring to economies, the effectiveness of these organisations is not sufficiently documented.

Enterprise development has emerged as a vehicle to achieve sustainable economic growth and development (Scillitoe and Chakrabati, 2010). However, in South Africa, there has been limited initiatives by both private and public organisations aimed at mainstreaming the participation and role of SMMEs within the country's economy. Business incubators can provide incubated companies with a conducive work environment to enable emerging businesses to survive (Tilana, 2015). In South Africa, business incubators are considered to significantly impact economic growth and development (Lose, 2016).

The studies by Bengesi and Le Roux (2014); and Wiklund and Shepherd (2005), assessing the impact of entrepreneurial orientation (EO) on SMME firm performance, used profit as a performance measure. Some studies used sales turnover growth, profits, number of jobs created and market share to measure the relative performance of SMMEs (Lukes, Longo and Zouhar, 2019). The challenge with the measure in revenue is that there are still operating costs associated with running a business that may or may not make the business profitable. To assess the outcome of incubation, the services offered by business incubators and how they address the challenges faced by the entrepreneurs should be reviewed.

3 Data and Methodology

The study used secondary data descriptive cross-sectional survey of incubated SMMEs owners, utilising quantitative techniques in collecting the data at a particular- point in time. Data was collected from the Small Enterprise Development Agency (SEDA) in annual reviews where details of their incubators and post-incubation entrepreneurs were recorded. This study included incubated business mainly in the publicly administered programmes. It was a challenge to estimate the population size as there is limited monitoring of business incubators post the incubation program as most incubators do not keep contact with incubatees after graduation.

A cross-sectional approach was applied focusing on the independent change variables measured in terms of change in the number of employees between two points in time: start-up time and survey, similarly with change in turnover the SMME's realised. The sampling comprised of SMMEs owners in the province of Gauteng who had been through an incubation program. This sampling frame comprises a list of public incubators as obtained from the SEDA publications and other reliable sources. This study included incubated businesses mainly in the publicly administered programmes. Since the study is cross-sectional, it considered entrepreneurs who have completed an incubation program. This approach comprised a mix of black-owned and non-black-owned incubated companies, thus limited generalisability is mitigated, given broader insight sourced from different business incubation programs and groups.

The SMME incubation program in Gauteng is based on a high number of incubation centres concentrated in Gauteng. A sample size of 32 incubated SMMEs was sourced using the purposive sampling technique. These SMMEs went through the incubation program responsible for providing financial and non-financial assistance, business incubation, and quality support services. An attempt was made to split further the sample size of 32 SMMEs incubated across different industry sectors.

The data was put through Minitab software after it was coded. In addition, a program such as Pareto and ANON was used to test themes, such as barriers that SMMEs faced before joining the incubator. These statistical tools were also applied to test the SMMEs' test skills to be important for business survival, success, and growth-related to the support received. A one-way analysis of variance (ANOVA) is also adopted within this study. The ANOVA t-test statistic of $p \leq 0.05$ indicates significant results, meaning that the groups differ significantly (Diamantopoulos and Schlegelmilch, 2000). On the other hand, when $p \geq 0.05$ indicates that the results are not significant, there is no difference in the mean scores of the groups or organisations.

4 Results and Discussions

The data sourced from SEDA's 32 incubated SMMEs have shown the age of only two owners, equivalent to 0.06% from the sample. This implies that there is less focus placed on age according to SEDA selection and criterion applied. Therefore, no further analysis was done on age as a factor.

The test performed on the racial representation of the business owners was to determine whether SEDA is providing service according to target as per acceptance criteria in the program. The study revealed that racial groups within the black categories make up the largest group of participants, almost 80%. It can therefore be assumed that this percentage is representative of the sample size.

In terms of the character of businesses sampled, the findings revealed that the Manufacturing sector had the highest representation rate at 37.5%. Engineering 12%, Services 9.38% and Motor, Agro-processing and Food and Entertainment all with 6.25% representation. All the other remaining sectors had a representation of below 5% from the sample.

4.1 Analysis of barriers faced by SMMEs before joining the incubation program

Figure 1 below shows the analysis of the barriers faced by SMMEs before joining the incubation program.

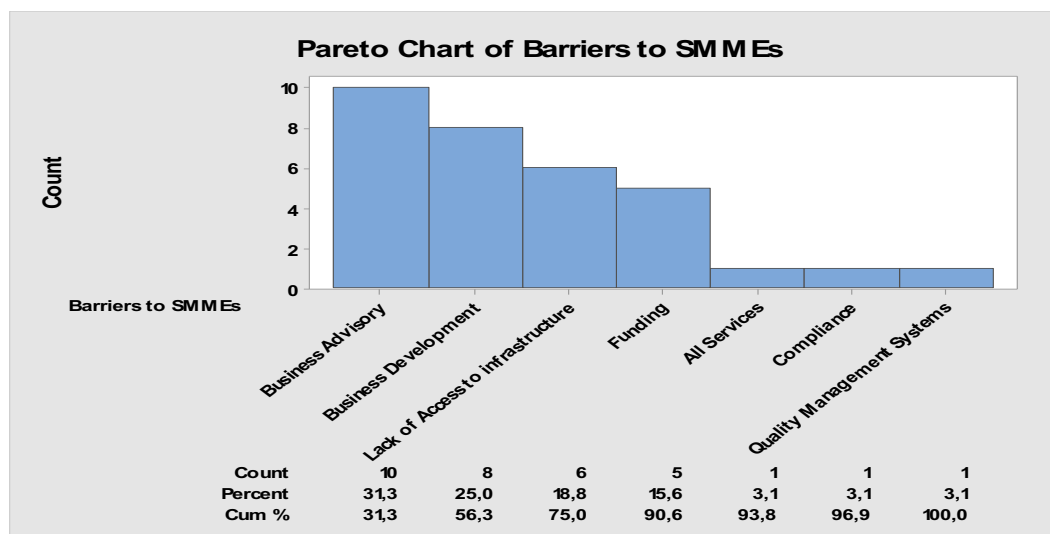


Figure 1. Barriers to SMMEs before joining SEDA

The most common challenges faced by SMMEs that entered the SEDA incubation program include Business Advisory, Business Development, Lack of Access to Infrastructure and Funding. These four challenges contribute to 75% of the common challenges raised by SMMEs when they enter the incubation program. Further tests on the barriers of SMMEs before joining the SEDA incubation program, analysis of the data in terms of revenue growth and the barriers to SMMEs was conducted. The results show that lack of access to infrastructure, funding and quality management systems have a high revenue growth than the other factors. In addition, the SMMEs that faced these barriers to the growth experienced high growth in revenue post the incubation program. Business incubators experience negative sales revenue during the earlier stages of the incubation and positive sales revenue in the long-term post incubation programme (Lukes et al., 2019).

Analysis of barriers to SMMEs and the impact on growth and development of SMMEs post-incubation program was also conducted. An interaction plot ANOVA test was conducted to test whether there is a relationship between SMMEs and background skill level barriers. The objective of the test was to determine whether the relationship between the two factors results in high revenue growth for the SMMEs. With this test, the barriers and the level of skill of the SMMEs and their growth can be isolated. The results of the test show that: semi-skilled SMMEs that experienced a lack of access to infrastructure, funding and quality management systems had very high growth in revenue post the incubation; skilled SMMEs with funding as a barrier to growth and development before incubation experienced very high levels of revenue growth; unskilled

SMMEs experienced the lowest growth in revenue (below average), and the only interaction with the barriers was Business Advisory and did not have a significant impact on the revenue growth.

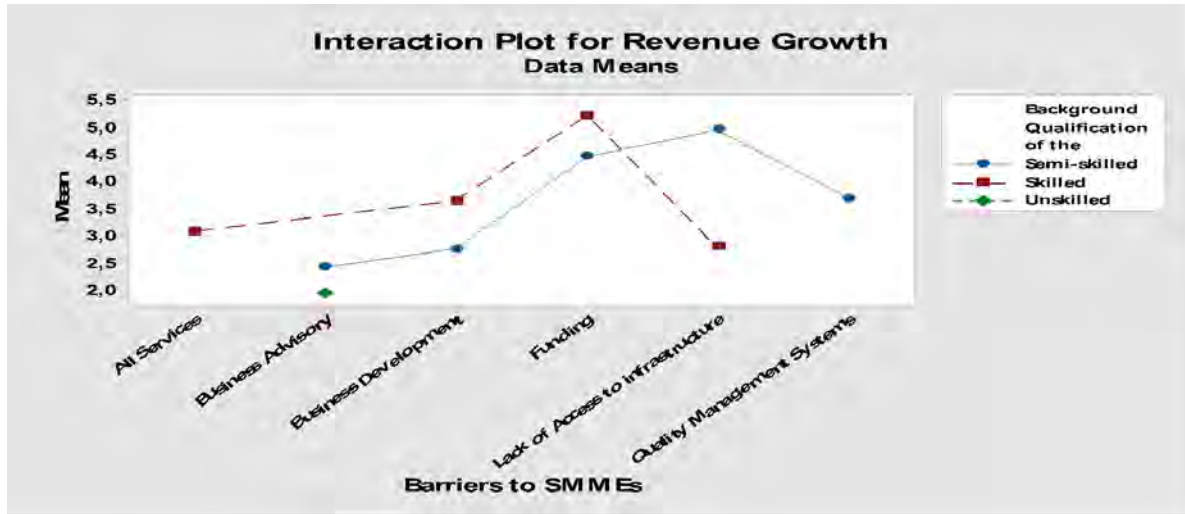


Figure 2. Barriers to SMMEs and Background Skill Level

4.2 Analysis of background entrepreneurial skill level

In order to establish the background skill level of the SMMEs before joining the incubation program, a Pareto analysis was conducted. The results of the Pareto analysis are presented on the graph below (figure 3). There were 19 semi-skilled level entrepreneurs, ten skilled level entrepreneurs, two unskilled entrepreneurs and one unclassified. The percentage contribution of each level of skill is shown on the graph, with semi-skilled and skilled level entrepreneurs contributing 93% of the total skill level of all entrepreneurs.

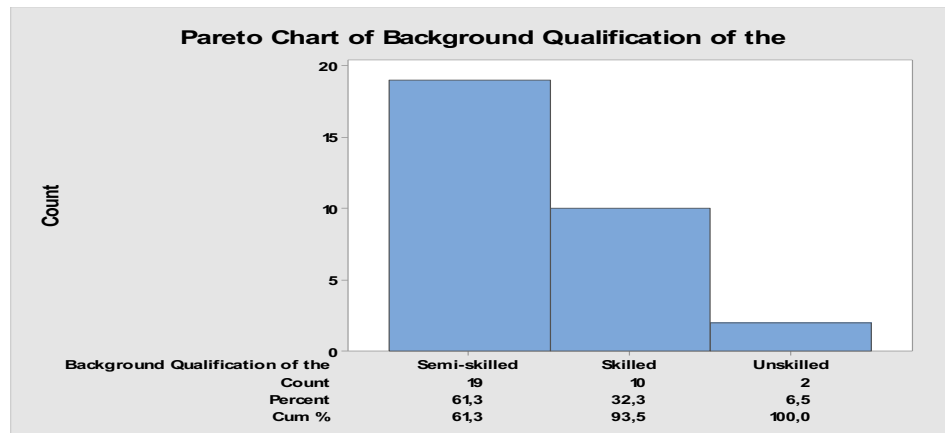


Figure 3. Background Qualifications of the SMMEs

The Main Effects graph (see Figure 4) plots Revenue Growth as an output variable (Y) versus the background skill level as an input variable (X). This is to test the impact of the background skill

level on the growth and development of SMMEs. The Pareto analysis (Figure 3) indicates that the entrepreneurs were mainly semi-skilled (61.3%) and skilled (32.3%) before joining the incubation program. The results (see Figure 4) support the Pareto analysis above and show that SMMEs with entrepreneurs with Semi-skilled and Skilled level have a higher growth ratio than unskilled entrepreneurs. Therefore, it can be inferred that semi-skilled and skilled entrepreneurs can grasp the business advisory and business development support functions provided by SEDA to help SMMEs grow and develop. However, to further explore and test this hypothesis, an ANOVA test was conducted to test the interaction of the two factors.

The ANOVA test reveals that the level of education and prior experience in the sector do not positively influence the growth and development of SMMEs. This poses a new challenge to business incubators to ensure that they provide relevant skills and impart acumen to bridge the gap already identified.

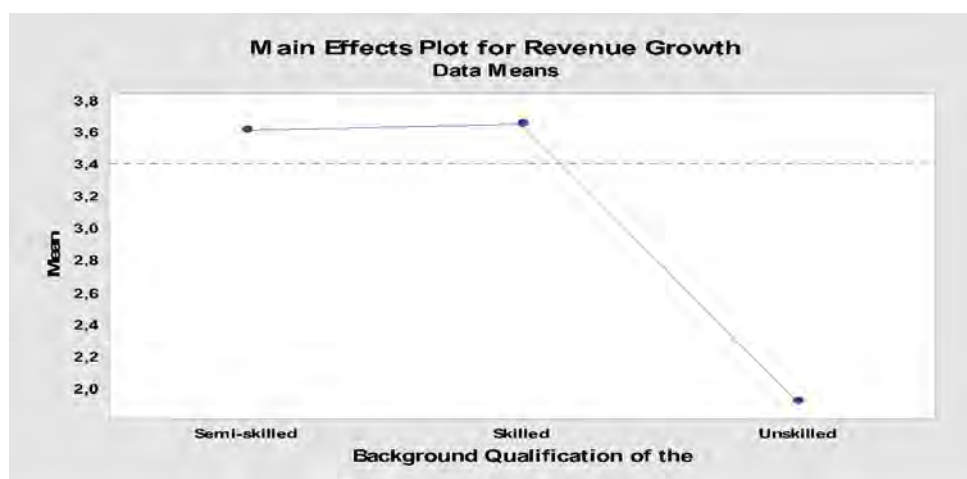


Figure 4. Revenue Growth and Background Qualifications

4.3 Analysis of entrepreneurial skills delivered through business incubation programs

A review of SEDA's support functions provided to SMMEs was analysed using a Pareto chart (see Figure 5). The Pareto analysis shows which support functions were frequently provided to the SMMEs. For example, funding, Business Development, Access to Infrastructure, Business Advisory and Compliance contributed 66% to the total 32 incubation support functions provided to the SMMEs. This would infer that these functions are critical factors that contribute to the growth and development of SMMEs.

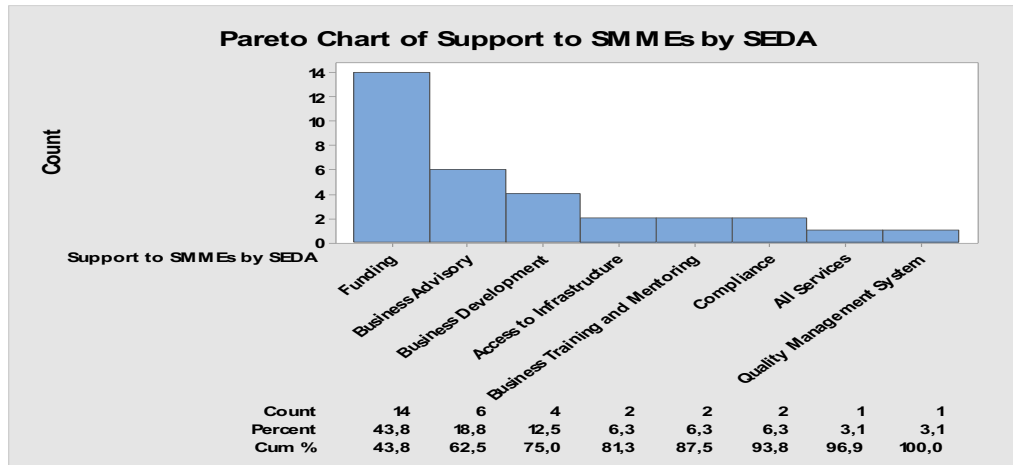


Figure 5: Support to SMMEs

A Main Effects Plot test (figure 6) was conducted to test which support factors significantly impacted Revenue Growth. The results of the Main Effects Plot are presented below. The Main Effects Plot factors highlighted to significantly impact Revenue Growth are Business Training and Mentoring, Funding and Quality Management Systems.

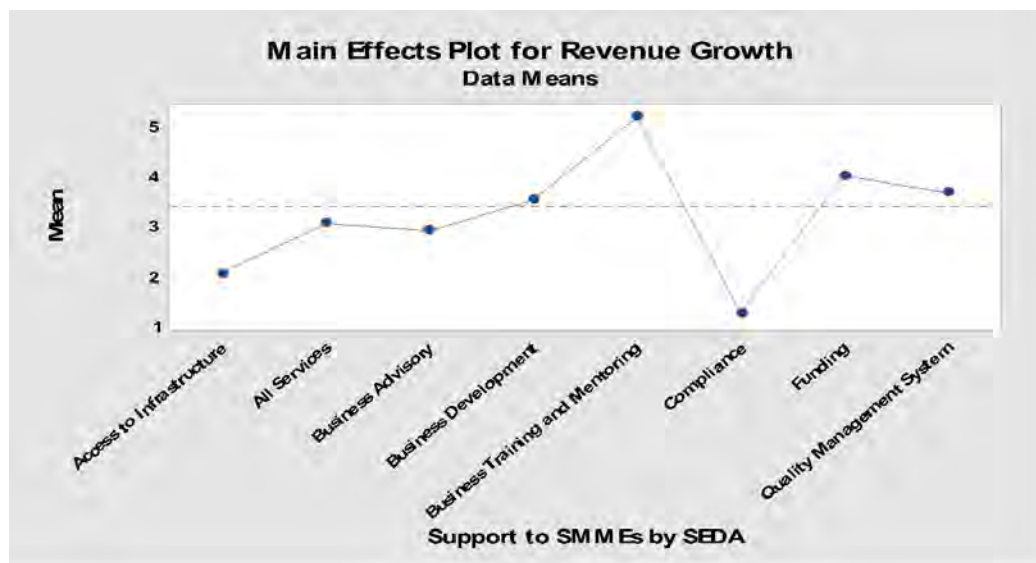


Figure 6: Supports factors and Revenue Growth

An interaction plot ANOVA test was conducted to test whether there is a relationship between SMMEs and background skill level barriers. The objective of the test was to determine whether the relationship between the two factors results in high revenue growth for the SMMEs. With this test, the barriers and skill level that contribute to the SMMEs' growth can be isolated. The ANOVA test reveals that: semi-skilled SMMEs that faced a lack of access to infrastructure, funding and quality management systems had very high growth in revenue post the incubation; Skilled SMMEs with Business Development and Business Training and Development as the barriers to growth and development before incubation experienced very high levels of revenue growth; Unskilled

SMMEs with compliance as a barrier to growth and development experienced moderate revenue growth.

Entrepreneurial skills such as training can influence of the revenue growth. SMMEs can improve their managerial skills such as financial management, strategic planning and human resource management through training and seminar (Asah, Fatoki and Rungani, 2013). Training and seminar provide a platform for collaboration between incubates and incubator management, increasing the likelihood of raising capital (Rubin, Aas and Stead, 2015). Thus, the barrier of financial support will be minimised. Business advisory constraint can be mitigated through coaching and mentoring. Business mentorship is long-term business counselling relationship between an experienced business advisor and a client throughout the various stages of a business venture's growth (Nieman and Nieuwenhuizen, 2009). Entrepreneurial skill such as financial management will assist the incubatees in measuring and controlling of sales/revenue growth. The commonly used growth indicators include sales/revenue, employment, performance, market share, asset, profit (Wiklund and Shepherd, 2005). Managing these constraints, business incubators can be an effective tool for developing new ventures and contributing to job creation and economic development (Chandra and Fealey, 2009).

5 Conclusions and Further Research

For the incubation program to be successful, its service offerings should be aligned with the needs of SMMEs. Through incubation, the challenges which SMMEs identified before they joined the incubation program should be eliminated. The most common challenges faced by SMMEs that entered the SEDA incubation program include Business Advisory, Business Development, Lack of Access to Infrastructure and Funding.

Lack of access to infrastructure, funding and quality management systems contribute to high revenue growth than other factors. The semi-skilled and skilled SMMEs who experienced barriers such as funding before incubation can achieve high growth in revenue post the incubation program. The entrepreneurial skills required for SMME success are post-matric qualification and industry experience (Semi-skilled and Skilled SMMEs). SMMEs that are recruited into the incubation programme should be provided with relevant training during the incubation process. The growth and development of the SMMEs post-incubation program can be measured by revenue growth. Business Advisory, Business Development, Funding and Lack of access to infrastructure are the most prevalent barriers faced by SMMEs before to joining the incubation program. The entrepreneurial skills required for SMME success are a post-matric qualification and an industry experience.

The implication of the findings on key challenges faced by the SMMEs recruited into the incubation program is that government needs to re-examine the operating model of incubators to amend it to sustain the SMMEs in contributing to the economic growth. The implication to policymakers is to address the barriers experienced by the SMME before joining the incubation program, and the barriers post the incubation program. The operating model of the business incubators should be aligned with their mission and vision to remain economic hubs able to sustain job creation.

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